

Product Range  
International  
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Utilities  
Machines and tools





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# MSA Plus overview



MSA Plus 250



MSA Plus 300



MSA Plus 350



MSA Plus 400

Temperature-dependent energy control	•	•	•	•
Wide input voltage range (180 - 264 V)	•	•	•	•
Suitable for generator operation	•	•	•	•
Automatic fusion data recording via barcode pen/scanner	•	•	•	•
For series and long-run fusion	•	•	•	•
Dust and spray water protected (IP 65)	•	•	•	•
Maximum protection from electrical hazards, protection class 1	•	•	•	•
Light, robust aluminum housing	•	•	•	•
Sturdy transport box	•	•	•	•
Active housing cooling	•	•	•	•
Manual entry of fusion time	•	•	•	•
Indication of fusion time and fusion energy	•	•	•	•
Menu guidance in more than 27 languages		•	•	•
Programmable maintenance intervals		•	•	•
User guidance		•	•	•
Individual configuration		•	•	•
Log book software MSA WIN-WELD			•	•
Internal safety protocol storage			•	•
Fusion data logging			•	•
Memory card for 1700 welds				•
Complete traceability of individual piping components according to ISO 12176-4)				•

# Technical data

Technical data	MSA Plus 250	MSA Plus 300	MSA Plus 350	MSA Plus 400
Input voltage range	180 - 264 V AC			
Frequency range	45 - 65 Hz			
Current consumption	16 A			
Power rating	3500 W			
Output voltage	8 - 42 V [48 V]			
Output current	0.5 - 90 .			
Safety cutout upstream	16 A surge-proof			
Protection class	IP 65			
Protection rating	1			
Housing	aluminum			
Active housing cooling	yes			
Connecting cable	3 m			
Fusion cable	3 m			
Weight (operational, incl. cable)	11.5 kg			
Dimensions (W/H/T)	284/440/195			
Processable barcodes	Code I 2/5 Code 128 C			
Working temperature range	-10°C to +45°C			
Automatic temperature compensation	yes			
Fusion current monitoring	yes			
Coil short-circuit recognition	yes			
Display	LED 7- Seg x 4 N	LCD graphic	LCD graphic	LCD graphic
Documentation of fusion data	-	-	yes	yes
Documentation of traceability data	-	-	-	yes
Internal data storage	-	-	yes, 2500	yes, 2500
External data storage, memory card	-	-	-	yes, 1700
USB interface type A	-	yes	yes	yes
USB interface type B	-	yes	yes	yes
Protocolling software MSA WIN-WELD	-	-	yes	yes
Data transmission cable	-	-	optional	optional
Memory card	-	-	-	yes, 32 MB
Welder pass (configurable as mandatory entry)	-	-	yes	yes
Manual fusion data entry	yes			
Language versions	-	27	27	27
Angle plug 4.0 mm	yes			
Barcode scanner	optional			
Transport box (aluminum/wood)	yes			
Recommended generator power	3.5 kVA			
Norms: CE, EN 55014, EN 50081-1, EN 50082-1, EN 61000-3-3, EN 60335-1, EN 60335-2-45	yes			

# Machines & Equipment for Electrofusion

## Electrofusion Units

### MSA Plus 400

#### Traceability electrofusion unit

#### With USB interfaces



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Professional Electrofusion unit for traceability of piping system components from raw material to completed Electrofusion joint (in accordance with ISO 12176). The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is equipped with compact flash memory card (exchangeable data carrier) and either a barcode reader pen or barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Scope of delivery includes: 1 transport case, 1 USB memory stick, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

For printer or PC communication, the USB cable (799350619) is required.

#### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) for printer communication and to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Korean, Latvian, Lithuanian, Macedonian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description	
MSA Plus 400	<b>799 350 580</b>	15.784	barcode reader pen, transport case	
MSA Plus 400	<b>799 350 581</b>	15.926	barcode scanner, transport case	

PF 2 51 306 003

# Machines & Equipment for Electrofusion

## MSA Plus 350

### Record electrofusion unit

### With USB interfaces



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Professional Electrofusion unit for recording jointing data of Electrofusion components as a basis for electronic joint recording. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is equipped with either a barcode reader pen or with barcode scanner. The unit is robust, light and easy to use. The menu has up to 27 different languages. Scope of delivery includes: transport box, 1 USB memory stick, 1 pair of angle adapter clips 4.0 mm, operating instructions, configuration card and Software MSA WIN-WELD.

To read out the fusion protocols, either the USB cable (799 350 619) or the USB memory stick (799 350 622) is required.

#### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) for printer communication and to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Korean, Latvian, Lithuanian, Macedonian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description	
MSA Plus 350	<b>799 350 570</b>	14.500	barcode reader pen, transport case	
MSA Plus 350	<b>799 350 571</b>	15.852	barcode scanner, transport case	

PF 2 51 306 003

# Machines & Equipment for Electrofusion

## MSA Plus 300

### Automatic electrofusion unit With USB interfaces



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Automatic Electrofusion unit with barcode reader pen, optional with barcode scanner. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is robust, light and easy to use. The menu has up to 27 different languages. Scope of delivery includes: transport box, 1 pair of angle adapter clips 4.0 mm, operating instructions and configuration card.

To load software updates the USB memory stick (799 350 622) is required.

#### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Interfaces	USB (type A) to load software updates USB (type B) for PC communication
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LCD graphic, background light, contrast adjustment
Size display (WxH)	132 x 39 mm
Type size	8 mm
Languages	Brasilian, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Korean, Latvian, Lithuanian, Macedonian, Malaysian, Norwegian, Polish, Portuguese, Rumanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Turkish
Warranty	24 months

Type	Code	kg	Description	
MSA Plus 300	<b>799 350 560</b>	15.797	barcode reader pen, transport case	
MSA Plus 300	<b>799 350 561</b>	15.737	barcode scanner, transport case	

PF 2 51 306 003



# Machines & Equipment for Electrofusion

## MSA Plus 250

### Automatic electrofusion unit



**NEW, environmentally friendly manufactured Electrofusion unit in accordance with EU directive 2002/95/EU (RoHS).**

Automatic Electrofusion unit with barcode reader pen, optional with barcode scanner. The MSA units with the unique inverter technology and the active cooling system for trouble-free operation from generator or mains supply. Suitable for jointing in series. The unit is robust, light and easy to use. Single push-button operation, display shows fusion time and energy consumed. Scope of delivery includes: transport box, 1 pair of angle adapter clips 4.0 mm and operating instructions.

#### Technical Data

Ambient temperature	-10 °C to +45 °C
Mains voltage	180 V - 264 V AC
Mains frequency	45Hz - 65 Hz
Fusion voltage	8 - 42 (48) V AC
Fusion current	max. 80 A
Power	max. 3500 W
Protection	1 / IP 65
Mains cable	3 m
Fusion cable	3 m
Dimensions (WxHxD)	284 x 440 x 195 mm
Weight incl. cables	ca. 11,5 kg, light-weight aluminium housing
Display	LED 1 x 4 N, 7 Segments
Size display (WxH)	50 x 18 mm
Type size	14 mm
Warranty	24 months

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Type	Code	kg	Description	
MSA Plus 250	<b>799 350 550</b>	15.222	barcode reader pen, transport case	
MSA Plus 250	<b>799 350 551</b>	15.285	barcode scanner, transport case	

## Electro fusion units

**MSA 210** monovalent (39,5 V fusion voltage)

**MSA 230** monovalent (39 – 40 V fusion voltage)

**MSA 330** polyvalent (8 – 48 V fusion voltage)

**MSA 340** polyvalent (8 – 48 V fusion voltage)

Reliable and easy to operate electro fusion units for various applications like water and gas distribution, irrigation or industrial applications.

The range of machines includes monovalent (constant fusion tension) and polyvalent welding units. Manual fusion data input or comfortable and safe bar code reading is provided by the units. The functionality to trace the welding and component data - including automatic recording of geo data - is supported within the product line.



# Machines & Equipment for Electrofusion

## MSA 210 Manual Electrofusion Unit



Monovalent electrofusion unit (fusion voltage 39,5 Volt) with easy manual entry of fusion time by the operator according to the fitting requirements. The unit can be used to weld +GF+ electrofusion fittings up to a nominal diameter of 500 mm SDR 17. Suitable for jointing in series, temperature excess protected. The unit stores the last fusion time and generates a consecutive fusion counter. A buzzer indicates the start and the end of the fusion cycle.

### Technical Data

Ambient temperature	-10°C to +40°C
Mains voltage	180 V - 250 V AC
Mains frequency	45 Hz - 65 Hz
Fusion voltage	39,5 V
Internal Fuse	20 A
Power consumption	max. 2750 W
Protection	IP 65
Mains cable	4 m
Fusion cable	3 m
Connector	4,0 mm / 90
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LED 1 x 4 N, 7 segments
Size display	50 x 18 mm
Type size	14 mm
Warranty	12 months

PF 3 10 588 100

Description	Code	kg	
Standard edition	<b>790 128 001</b>	22.879	

# Machines & Equipment for Electrofusion

## MSA 230 Standard

### Electrofusion unit with jointing data recording



Monovalent electrofusion unit (fusion voltage 39,0 – 40,0 Volt) equipped with barcode reader pen or scanner for automated data entry. Recording of jointing data and operator identification code. Easy to handle, robust machine for the whole range of ELGEF fittings. The Polybrand version supports the input of fusion barcodes from non GF fittings requiring a fusion tension between 39,0 to 40,0 Volt.

Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series.

Easy interaction by choosing the favourite language of the operator. Scope of delivery includes: 1 pair of straight adapter clips 4.0 ->4.7 mm and operating instructions. To read out the fusion protocols, the data transfer cable (790 128 112) is required. No need for dedicated software, therefore no XP/VISTA compatibility issues.

#### Technical Data

Fusion data entry	barcode or manual
Ambient temperature	-10°C to +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷ 70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

#### Scope of Delivery

MSA 230 Standard Pen	Barcode reader pen with pouch, straight adapter clips 4.0 ->4.7 mm
MSA 230 Standard Scanner	Barcode scanner with pouch, straight adapter clips 4.0 ->4.7 mm

Type	Code	kg	
MSA 230 Standard Pen	<b>790 128 007</b>	22.000	
MSA 230 Standard Scanner	<b>790 128 009</b>	22.616	
MSA 230 Standard Pen Polybrand	<b>790 128 027</b>	22.000	
MSA 230 Standard Scanner Polybrand	<b>790 128 029</b>	22.000	

PF 3 10 588 100

# Machines & Equipment for Electrofusion

## MSA 230 All-In

### Electrofusion unit with jointing data recording



Monovalent electrofusion unit (fusion voltage 39,0 – 40,0 Volt) equipped with barcode reader pen or scanner for automated data entry. Recording of jointing data and operator identification code. Easy to handle, robust machine for the whole range of ELGEF fittings. The Polybrand version supports the input of fusion barcodes from non GF fittings requiring a fusion tension between 39,0 to 40,0 Volt. Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series. Easy interaction by choosing the favourite language of the operator. To the “All-In” version a cable drum for safe and time-saving cable storage is already assembled, also the data transfer cable is in the scope of delivery. No need for dedicated software, therefore no XP/VISTA compatibility issues. Inclusive 1 pair of straight adapter clips 4.0 ->4.7 mm, operating instructions.

#### Technical Data

Fusion data entry	barcode or manual
Ambient temperature	-10°C to +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷ 70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Power plug	Schuko
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

#### Scope of Delivery

MSA 230 All-In Pen	Barcode reader pen with pouch, data transfer cable, cables drum, straight adapter clips 4.0 -> 4.7 mm
MSA 230 All-In Scanner	Barcode scanner with pouch, data transfer cable, cables drum, straight adapter clips 4.0 ->4.7 mm

Type	Code	kg	
MSA 230 All-In Pen	<b>790 128 008</b>	23.000	
MSA 230 All-In Scanner	<b>790 128 010</b>	23.000	
MSA 230 All-In Pen Polybrand	<b>790 128 028</b>	23.000	
MSA 230 All-In Scanner Polybrand	<b>790 128 030</b>	23.000	

PF 3 10 588 100



# Machines & Equipment for Electrofusion

## MSA 330 Electrofusion unit with jointing data recording



The MSA 330 electrofusion unit combines high performance in jointing with easy and safe handling. The internal memory has a capacity of 500 jointing records, for data transfer the unit is equipped with an USB interface. The record is delivered as PDF or CSV format, both are manageable with common and free PC software applications. An intuitive operation menu guides you through the complete jointing process. For fusion data input a barcode reader pen or a scanner is connected. The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and the indication of cooling time. Robust aluminum housing with convenient cable winding and handle for weight balanced transport. The unit is suitable for jointing in series.

Scope of delivery: dedicated transport case, pouch for optical pen or scanner, 2 pairs of angle adapter clips 4,0 mm and 4,7 mm, operation instructions and configuration chart.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	180 V - 265 V AC
Mains frequency	40 Hz - 70 Hz
Fusion voltage	8 - 48 V AC
Fusion current	max. 90 A
Power consumption	max. 2,75 kW
Protection	Class 1 / IP 54
Mains cable	4 m
Fusion cable	4 m
Interface	USB (type A) for PC communication and software updates
Dimensions (WxHxD)	280 x 480 x 320 mm
Weight incl. cables	ca. 21,7 kg
Display	LCD (20 alphanumerical char. x 4 lines), contrast adjustment, blue background, white characters
Languages	10

description	Code	kg	
Barcode reader pen, transport case	790 160 004	30.000	
Barcode scanner, transport case	790 160 005	30.000	

PF 3 10 588 100

# Machines & Equipment for Electrofusion

## MSA 340 Traceability Electrofusion unit with GPS function



High performance electrofusion unit providing an entire documentation of fusion and traceability data (ISO 12176) including GPS coordinates added automatically to each fusion record. The internal memory has a capacity of 1000 jointing records, for data transfer the unit is equipped with an USB interface. The record is delivered as PDF or CSV format, both are manageable with common and free PC software applications. An intuitive operation menu guides you through the complete jointing process. For fusion data input a barcode scanner is connected. The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and indication of cooling time. Robust aluminum housing with convenient cable winding and handle for weight balanced transport. The unit is suitable for jointing in series. Rental time period programmable by the machine owner, unit blocks on expiring date, reset by password.

Scope of delivery: dedicated transport case, pouch for scanner, 2 pairs of angle adapter clips 4,0 mm and 4,7 mm, operation instructions and configuration chart.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	180 V - 265 V AC
Mains frequency	40 Hz - 70 Hz
Fusion voltage	8 - 48 V AC
Fusion current	max. 90 A
Power consumption	max. 2,75 kW
Protection	Class 1 / IP 54
Mains cable	4 m
Fusion cable	4 m
Interface	USB (type A) for PC communication and software updates
Dimensions (WxHxD)	280 x 480 x 320 mm
Weight incl. cables	ca. 21,7 kg
Display	LCD (20 alphanumerical char. x 4 lines), contrast adjustment, blue background, white characters
Languages	10

PF 3 10 588 100

description	Code	kg	
Barcode scanner, transport case	790 160 007	30.000	

# Machines & Equipment for Electrofusion

## Tools and Accessories for MSA Plus

### Machines



#### Software MSA WIN WELD

##### General functions:

- Reading and management of fusion data
- Sort- and filter functions
- Issuing of single records, collected records
- Reading and formatting of memory cards
- Reading and management of traceability data according to ISO 12176-4
- Export functions for conversion to conventional data base files, Excel or Access
- Installed languages: German, English, French, Italian, Dutch, Croatian, Spanish
- Creating individual barcodes
- Individual configuration of fusion devices
- Professional software for analysis and data management of Electrofusion data, traceability data and for configuration barcodes (Z functions).
- Compatibility with MSA 350/MSA Plus 350 (fusion data) and MSA 400/MSA Plus 400 (fusion and traceability data).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, installation guide (manuals and additional information on CD-ROM)

Code	kg	Description	
<b>799 350 365</b>	0.180	Software for MSA 350-400 and MSA Plus 350-400	

PF 2 51 306 001



#### Software PIPE WIN WELD / SUVI WIN WELD

- Professional software for analysis and documentation of installed piping systems or of a defined part of it: i. e. Pipe book. With PIPE WIN WELD it is possible to create a complete electronic documentation of the installed pipes and pipe connection elements. The software works with the data bases of MSA WIN WELD and SUVI WIN WELD. The software makes it possible to work with data from other manufacturers (CSV module for data transfer).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, USB hardlock (PIPE WIN-WELD, PIPE WIN-WELD CSV), installation guide (manuals and additional information on CD-ROM)

Type	Code	kg	Description	
PIPE CSV	<b>790 119 301</b>	0.180	Complete package incl. CSV module for data transfer, USB hardlock	
PIPE	<b>790 119 302</b>	0.180	Complete package, USB hardlock	
SUVI	<b>790 119 303</b>	0.180	Complete package	

PF 3 25 117 312



#### Transport case MSA fusion unit

##### Note:

Large Transport Case for MSA 250, 300, 350, 400, MSA Plus 250-400 Units and accessories (barcode scanner, manuals)

Code	kg	Description	
<b>799 350 401</b>	5.540	Transport Case MSA (30x33x20 cm)	
<b>799 350 472</b>	5.540	Transport Case large MSA Plus (33x47x22 cm)	

PF 2 51 306 004



# Machines & Equipment for Electrofusion

## Barcode Reader Pen for MSA and MSA Plus



PF 2 51 306 001

- Compatible with MSA 250, 300, 350 and 400 and MSA Plus 250-400 Electrofusion control units. (As additional/replacement component. A bar code reader pen or scanner is provided with all MSA 250-400 and MSA Plus 250-400 units).

Code	kg	Description	
799 350 335	0.165	Barcode reader pen	
799 160 411	0.072	Pouch for pen suitable for MSA 250-400 and MSA Plus 250-400	

## Barcode Scanner for MSA and MSA Plus



PF 2 51 306 001

- Robust, handy barcode scanner with a high reading performance made for the construction site. Quick, safe and professional!  
Compatible with MSA 500, MSA 3000, MSA 250, 300, 350 and 400 and MSA Plus 250-400 Electrofusion control units.

Code	kg	Description	
799 350 419	0.350	Barcode scanner with pouch and instructions	

## USB memory stick



PF 2 51 306 005

- Memory stick to update MSA Plus 300-400 fusion units with new software and languages
- Download protocols
- Compatible with MSA Plus 300-400

Code	kg	Description	
799 350 622	0.035	Memory stick (for software or languages updates)	

## USB cable



PF 2 51 306 005

- PC and printer transmission cable to transfer fusion data directly to PC or to printer
- Compatibility with MSA Plus 350-400

Code	kg	Description	
799 350 619	0.062	USB cable (type A/B) for printer and PC connection	

## Compact flash card



PF 2 51 306 005

- Memory card type I to record fusion and traceability data
- Reliable and resistant data carrier for industrial use
- Compatible with MSA Plus 400
- In connection with the PCMCIA-CF Adapter (799 350 623) this compact flash card is **unsuitable for MSA 400 units!**

Code	kg	Description	
799 350 621	0.010	Memory card (32 MB capacity for 1700 fusion protocols)	

# Machines & Equipment for Electrofusion

## Card reader



PF 2 51 306 005

- To read in fusion and traceability data from the compact flash card (799 350 621) in the PC via USB (type A) interface
- Flexible card reader with slots for different cards
- Compatible with MSA Plus 400

Code	kg	Description	
<b>799 350 620</b>	0.086	multiple card reader	



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## Adapter card PCMCIA-CF

- To read in fusion and traceability data from the compact flash card (799 350 621) into a PC via PCMCIA slot
- Can only be used for compact flash cards type I
- Compatible with MSA Plus 400

Code	kg	Description	
<b>799 350 623</b>	0.073	Adapter Card PCMCIA-CF	



PF 2 51 306 001

## Adapters

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with electrofusion units MSA 210-230, MSA 330-340, MSA 250 – 400, MSA 250 – 400 PLUS.

Type	Code	kg	Description	
4,0 mm	<b>799 350 340</b>	0.001	Angle adapter, black	
4,7 mm	<b>799 350 341</b>	0.057	Angle adapter, grey	
4,0 mm	<b>799 350 461</b>	0.014	Adapter, black	
4,7 mm	<b>799 350 462</b>	0.014	Adapter, white	

# Machines & Equipment for Electrofusion

## MSA 210 - 230 - 330 - 340 Accessories

### Geothermal cables kit



- Ability to joint in parallel 2 couplers of a Y fitting
- Recommended in combination with ELGEF fittings
- Compatible with MSA 210-230, MSA 330-340, MSA 250 – 400, MSA 250 – 400 PLUS
- Connector: 4 mm (90°)
- Cable length: 290 mm
- Welding voltage: 0 – 48 Volt
- Welding current: 40 A (max.)
- Content of delivery: 2 cables, pouch, protection caps, operation manual

Code	kg	
790 160 176	0.385	

PF 3 10 588 900

### Cables Drum



- Fast and safe cable winding
- Easy to fix to MSA 210 and MSA 230 units
- MSA 230 All-In already assembled with the cables drum

Type	Code	kg	
MSA 210 / MSA 230	790 128 117	0.700	

PF 3 10 588 500

### Data Transfer Cable

- RS 232 data transfer from MSA 230 to PC



Type	Code	kg	
MSA 230	790 128 112	0.125	

PF 3 10 588 500

### Barcode Reader Pen

- Automated data entry to MSA 230 / MSA 330 Electrofusion units



Type	Code	kg	
MSA 230 / MSA 330	790 128 111	0.125	

PF 3 10 588 500

### Pouch For Barcode Reader Pen

- Suitable for barcode reader pens MSA 230 – 330 and others like 799350335 used with MSA PLUS and SUVI units
- 2 separate pockets for storage of reader and adapter clips



Type	Code	kg	
MSA 230 / MSA 330	790 128 110	0.075	

PF 3 10 588 500

### Barcode Scanner

- Automated data entry to MSA 230 / MSA 330 Electrofusion units



Type	Code	kg	
MSA 230 / MSA 330 / MSA 340	790 128 119	0.250	

PF 3 10 588 500

# Machines & Equipment for Electrofusion

## Pouch For Barcode Scanner



PF 3 10 588 500

- Suitable for barcode scanner MSA 230 (790128119) and MSA 330/340 (790160003)
- 2 separate pockets for storage of reader and adapter clips

Type	Code	kg	
MSA 230 / MSA 330 / MSA 340	<b>790 128 120</b>	0.125	



PF 3 10 588 100

## Transport Box

- Large, robust transport box

Type	Dimension	Code	kg	
MSA 230	273x263x464	<b>790 128 121</b>	6.300	
MSA 330 / MSA 340	273x263x464	<b>790 160 010</b>	8.000	



PF 2 51 306 001

## Adapters

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with electrofusion units MSA 210-230, MSA 330-340, MSA 250 – 400, MSA 250 – 400 PLUS.

Type	Code	kg	Description	
4,0 mm	<b>799 350 340</b>	0.001	Angle adapter, black	
4,7 mm	<b>799 350 341</b>	0.057	Angle adapter, grey	
4,0 mm	<b>799 350 461</b>	0.014	Adapter, black	
4,7 mm	<b>799 350 462</b>	0.014	Adapter, white	

# Machines & Equipment for Electrofusion

## Tools for preparing pipe surfaces

### Rotary Peeler RS



This innovative Rotary Peeler RS is designed for universal peeling at the pipe end for electrofusion couplings, tees and elbows and as well as for electrofusion saddles. Suitable for peeling PE80, PE100, PEX and PP pipes.

#### Features and your advantage:

**Spring loaded peeling blade:**Peeling quality independent of pipe ovality or tolerances

**Pivoted mounted peeling blade:**To compensate the shape of coiled pipe

**Optimized cutting geometry:**Defined chip thickness with cutting width overlap

**One tool per dimension:**Minimized swivel radius for peeling in narrow locations

**Peeling length:**No limitation of peeling length

**Guidance rolls:**3-point-support for dimensional optimized cutting feed

**Time saving:**Tool is always ready for use, it can be used for the next peeling without having to set the peeling blade back in its origin position

**Your advantage:**Time saving and highest repeatable peeling quality at smallest rotation radius. No operator errors possible when changing dimension

**Included:**1 x Rotary Peeler RS, Transport case, Operating manual, Spare parts list

Article	d [mm]	Code	kg	
RS 40	40	<b>790 136 001</b>	1.310	
RS 50	50	<b>790 136 002</b>	1.310	
RS 63	63	<b>790 136 003</b>	1.310	
RS 75	75	<b>790 136 004</b>	1.540	
RS 90	90	<b>790 136 005</b>	1.540	
RS 110	110	<b>790 136 006</b>	1.540	
RS 125	125	<b>790 136 007</b>	1.730	
RS 140	140	<b>790 136 008</b>	1.730	
RS 160	160	<b>790 136 009</b>	1.730	
RS 180	180	<b>790 136 010</b>	2.030	
RS 200	200	<b>790 136 011</b>	2.030	
RS 225	225	<b>790 136 012</b>	2.030	
RS 250	250	<b>790 136 013</b>	2.440	
RS 280	280	<b>790 136 014</b>	2.440	
RS 315	315	<b>790 136 015</b>	2.440	

PF 3 25 879 100



### Replacement blade to Rotary Peeler RS

d-d [mm]	Description	Code	kg	
40 - 315	HSS	<b>790 136 112</b>	0.009	

PF 3 25 118 906



### Transport cases for Rotary Peeler RS

- Included in the scope of delivery of the Rotary Peeler RS

Article	Code	kg	Description	Dimension [mm]	
RSTC 40-110	<b>790 136 211</b>	0.718	for RS 40-RS 110	326 x 222 x 116	
RSTC 125-160	<b>790 136 212</b>	1.212	for RS 125-RS 160	437 x 395 x 116	
RSTC 180-225	<b>790 136 213</b>	1.796	for RS 180-RS 225	450 x 360 x 132	
RSTC 250-315	<b>790 136 214</b>	2.901	for RS 250-RS 315	566 x 435 x 156	

PF 3 25 879 100

# Machines & Equipment for Electrofusion

9 300 725



## Peeling tool PT 1 E

- The rotating Peeling Tool PT 1 E is suitable for preparing pipe ends with diameters d 20 - 90 mm (when installing Electrofusion couplers and fittings). The tool ensures a constant peeling quality on the complete peeling surface and is suitable for PE80, PE100 and PEX.
- Scope of delivery: 1 basic tool in a plastic carrying case, without pipe inserts. The case has sufficient space for approximately 6 pipe inserts.

PF 2 51 305 004

d-d [mm]	Code	kg	Description	
20 - 90	<b>799 150 382</b>	2.261	Basic Tool PT 1 E	

9 300 725

## Pipe inserts for peeling tool PT 1 E



d [mm]	e [mm]	Code	kg	Description	
20	1.9	<b>799 300 739</b>	0.220	Pipe Insert SDR 11	
20	3.0	<b>799 300 741</b>	0.220	Pipe Insert SDR 7	
25	2.3	<b>799 300 740</b>	0.230	Pipe Insert SDR 11	
25	3.0	<b>799 300 742</b>	0.230	Pipe Insert SDR 9	
32	3.0	<b>799 300 743</b>	0.230	Pipe Insert SDR 11	
40	3.7	<b>799 300 744</b>	0.230	Pipe Insert SDR 11	
40	1.8	<b>799 300 760</b>	0.220	Pipe Insert SDR 26	
50	4.6	<b>799 300 745</b>	0.350	Pipe Insert SDR 11	
50	2.0	<b>799 300 761</b>	0.220	Pipe Insert SDR 26	
56	2.2	<b>799 300 762</b>	0.588	Pipe Insert SDR 26	
63	3.8	<b>799 300 725</b>	0.475	Pipe Insert SDR 17	
63	5.8	<b>799 300 746</b>	0.475	Pipe Insert SDR 11	
63	2.5	<b>799 300 763</b>	0.220	Pipe Insert SDR 26	
75	4.5	<b>799 300 727</b>	0.601	Pipe Insert SDR 17	
75	6.9	<b>799 300 747</b>	0.601	Pipe Insert SDR 11	
75	2.9	<b>799 300 764</b>	0.220	Pipe Insert SDR 26	
90	5.4	<b>799 300 748</b>	0.834	Pipe Insert SDR 17	
90	8.2	<b>799 300 749</b>	0.220	Pipe Insert SDR 11	

PF 2 51 305 004

## Replacement blade for peeling tool PT 1 E



PT 1 E

PF 2 51 305 004

d-d [mm]	Piece	Code	kg	Description	
20 - 90	1	<b>799 150 383</b>	0.028	Replacement blade, 1 piece	

9 300 750



## Peeling Tool PT 2

- The rotating Peeling Tools PT 2 are suitable for preparing pipe ends (when installing Electrofusion couplers and fittings). The tool ensures a constant peeling quality on the complete peeling surface and is suitable for PE80, PE100 and PEX pipes.
- Scope of delivery: 1 tool (size 1, 2 or 3) in a metal carrying case.

PF 2 51 305 004

d-d [mm]	Code	kg	Description	
90 - 250	<b>799 300 753</b>	6.973	Size 1, peeling length 140 mm	
110 - 400	<b>799 300 755</b>	9.880	Size 2, peeling length 150 mm	
110 - 500	<b>799 300 756</b>	3.716	Size 3, peeling length 175 mm	

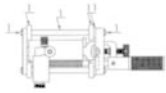
# Machines & Equipment for Electrofusion

## Spare Parts for PT 2 Peeling Tool

- Firm metal blade usable on four sides

d-d [mm]	Piece	Code	kg	Description	
90 - 500	1	<b>799 150 355</b>	0.008	Replacement blade, 1 piece	
90 - 500	1	<b>799 150 321</b>	0.100	Tool holder	

PF 2 51 305 004

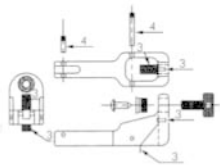


## Repair kit spindles for peeling tool PT 2

- Consisting of 1 main spindle, 1 fixing bolt, 1 end plate, 2 rollers and 1 spacing disk

d-d [mm]	Code	kg	
90 - 250	<b>799 150 360</b>	1.000	
110 - 400	<b>799 150 361</b>	0.420	
110 - 500	<b>799 150 362</b>	1.000	

PF 2 51 305 004

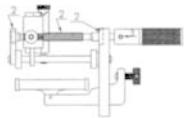


## Screws and springs repair kit for peeling tool PT 2

- Consisting of 1 assembly screw long, 1 clamping screw, 1 handle, 1 screw for flat spring, 1 screw for cutting plate, 1 nut for feed, 1 flat spring, 1 spring for rapid adjustment and 1 clamping spring

d-d [mm]	Code	kg	
90 - 500	<b>799 150 369</b>	0.079	

PF 2 51 305 004

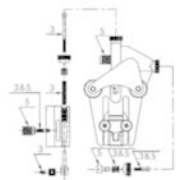


## Repair kit feed for peeling tool PT 2

- Consisting of 1 carriage bolt, 1 guide unit and 1 guide end plate

d-d [mm]	Code	kg	
90 - 250	<b>799 150 363</b>	0.500	
110 - 400	<b>799 150 364</b>	0.346	
110 - 500	<b>799 150 365</b>	0.500	

PF 2 51 305 004



## Tool holder repair kit for peeling tool PT 2

- 1 feed nut,
- 1 nut for feed,
- 1 spring for rapid adjustment,
- 1 washer
- 1 fixing screw

d-d [mm]	Code	kg	
90 - 500	<b>799 150 370</b>	0.069	

PF 2 51 305 004

# Machines & Equipment for Electrofusion

9 300 700



## Peeling tool PT 4

- The easy-to-use peeling tools PT 4 are suitable for preparing pipe ends (when installing Electrofusion couplers and fittings). The tools ensure a constant peeling quality on the whole peeled area and are suitable for PE80 and PE100 pipes. There is no tool service arrangement for the PT 4.
- Scope of delivery: 1 tool with exchangeable blade (4 cutting surfaces).

e [mm]	d [mm]	Code	kg	Description	
1.9	20	<b>799 300 704</b>	0.271	Pipe Insert SDR 11	
3.0	20	<b>799 300 705</b>	0.255	Pipe Insert SDR 7	
2.3	25	<b>799 300 706</b>	0.308	Pipe Insert SDR 11	
3.0	25	<b>799 300 707</b>	0.290	Pipe Insert SDR 9	
3.0	32	<b>799 300 708</b>	0.340	Pipe Insert SDR 11	
3.7	40	<b>799 300 709</b>	0.380	Pipe Insert SDR 11	
4.6	50	<b>799 300 710</b>	0.436	Pipe Insert SDR 11	
5.8	63	<b>799 300 711</b>	0.540	Pipe Insert SDR 11	

PF 2 51 305 004

9 300 700



PT 4

PF 2 51 305 999

## Replacement blade for peeling tool PT 4

d-d [mm]	Piece	Code	kg	Description	
20 - 63	1	<b>799 150 275</b>	0.006	Replacement blade with 4 cutting surfaces	



## Peeling Tool RTC-710

The peeling tool RTC-710 is suitable for preparing pipe ends in big dimensions (d 355-710 mm). The tool ensures a constant peeling quality on the complete peeling surface of max. 530 mm length and is suitable for PE 80 and PE 100 pipes.

Scope of delivery: 1 Scraper arm, 1 Self-centering chuck base, 2 Aluminium transport cases, 1 screwdriver, 1 spare blade, 1 deburring knife, 1 accessories bag.

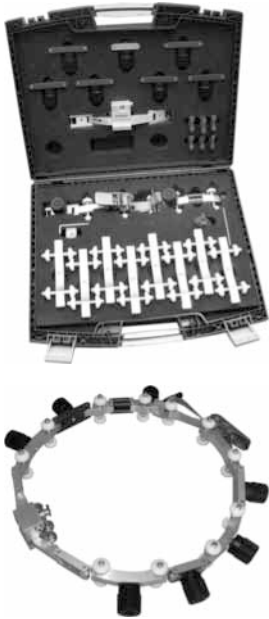
d-d [mm]	Code	kg	Description	
355 - 710	<b>799 300 757</b>	15.118	max. working-range 530 mm	

PF 2 51 305 001



# Machines & Equipment for Electrofusion

## Rotary peeling tool RST 800



PF 2 51 305 001

- The flexible peeling tool RST 800 is suitable for preparing welding zones of saddle and coupler jointings for Electrofusion fittings
- To ensure the constant removal of the oxidation layer for PE80 and PE100, a long lasting peeling blade made of carbide is used
- Easy-to-hinge chain links enable the staged operation of pipes d250 to d800 mm
- Compensation for ovality and variable pipe diameters with loaded spring component in the chain
- Scope of delivery includes: various chain links, spare blade, transport box

d-d [mm]	Code	kg	Description	
250 - 800	<b>799 300 800</b>	10.552	Rotary Peeling Tool RST 800	



PF 2 51 305 001

## Replacement blade for rotary peeling tool RST 800

d-d [mm]	Code	kg	Description	
250 - 800	<b>799 300 802</b>	0.020	Replacement blade in carbide	

9 198 033



PF 2 51 305 002

## Hand Scraper

- The Hand Scraper can be used to prepare the fusion zone on PE80 pipes.

Code	kg	Description	
<b>799 198 094</b>	0.143	Hand scraper with long handle	

# Machines & Equipment for Electrofusion

## Clamps and installation aids

### Multiple use assembly tool branch fitting d140mm

- Only to be used with Branch Fitting d140mm
- Delivered as complete Kit including screws and belt



PF 2 51 336 001

d [mm]	Code	kg	
140	<b>193 281 027</b>	0.724	

9 350 358

### Swivel clamp

- The Swivel Clamp centralises pipes with dimensions from d63 to 180 mm automatically. Suitable for coupler connections as well as reductions and bends. The 15° adjustment makes an exact positioning from 15° to 90° possible.



PF 2 51 305 008

d-d [mm]	Code	kg	
63 - 180	<b>799 350 358</b>	18.000	

9 301 475

### Double clamp

- The user-friendly Double Clamps are suitable for coupler connections. They are quickly and easily put into position and prevent pullout and pipe movements during the fusion time and cooling time.
- Scope of delivery: 1 tool consisting of 1 beam (compact), 2 V-clamps complete with ratchet and belt.



PF 2 51 305 008

d-d [mm]	Code	kg	
63 - 125	<b>799 301 484</b>	2.795	
110 - 225	<b>799 301 486</b>	10.000	
225 - 500	<b>799 301 488</b>	15.000	

# Machines & Equipment for Electrofusion

9 301 450



## Quadruple clamp

- The professional Quadruple Clamps are suitable for coupler connections. They are quickly and easily put into position and ensure a stress-free fusion. They prevent pullout and pipe movements during the fusion and cooling times.
- Recommended for difficult site conditions with large installation-induced stresses.
- Scope of delivery: 1 tool consisting of 1 beam (long), 4 V-clamps complete with ratchet and belt.

d-d [mm]	Code	kg	
63 - 125	<b>799 301 459</b>	6.900	
110 - 225	<b>799 301 461</b>	19.000	
225 - 500	<b>799 301 463</b>	28.500	

PF 2 51 305 008

9 301 525



## Twin clamp

- The easy-to-use Twin Clamp is suitable for coupler connections on straight or coiled pipe. The clamps prevent pullout and pipe movements during the fusion and cooling time.
- Scope of delivery: 1 complete tool.

d [mm]	Code	kg	
20	<b>799 301 536</b>	0.498	
25	<b>799 301 537</b>	0.471	
32	<b>799 301 538</b>	0.756	
40	<b>799 301 539</b>	0.876	
50	<b>799 301 540</b>	1.167	
63	<b>799 301 541</b>	1.438	

PF 2 51 305 003

9 301 575



## Multi clamp

- This tool is quick and easy to use and is suitable for straight forward connections to straight lengths of pipe or saddle branch outlets with electrofusion couplers.
- Scope of delivery: 1 tool without accessories.

d-d [mm]	Code	kg	
20 - 63	<b>799 301 575</b>	1.409	

PF 2 51 305 008

9 301 575

## Inserts for multi clamp

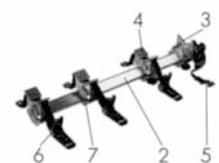


d-d [mm]	Code	kg	Description	
25 - 20	<b>799 150 385</b>	0.488	Inserts, Sets	
32 - 20	<b>799 150 386</b>	0.500	Inserts, Sets	
32 - 25	<b>799 150 387</b>	0.520	Inserts, Sets	
40 - 32	<b>799 150 388</b>	0.504	Inserts, Sets	
50 - 40	<b>799 150 389</b>	0.166	Inserts, Sets	
63 - 32	<b>799 150 390</b>	0.172	Inserts, Sets	
63 - 40	<b>799 150 391</b>	0.520	Inserts, Sets	
63 - 50	<b>799 150 392</b>	0.520	Inserts, Sets	

PF 2 51 305 008

# Machines & Equipment for Electrofusion

## Spare parts for clamps



PF 2 51 305 008

Pos	Dimension	Code	kg	Description
1	63-125, 45mm	<b>799 900 414</b>	1.700	square support short
	110-225, 60mm	<b>799 900 405</b>	3.500	square support short
	225-500, 80mm	<b>799 900 394</b>	6.000	square support short
2	63-125, 45mm	<b>799 900 413</b>	3.600	square support long
	110-225, 60mm	<b>799 900 404</b>	6.500	square support long
	225-500, 80mm	<b>799 900 387</b>	11.500	square support long
4	63-125	<b>799 900 421</b>	0.977	prism wide
	110-225	<b>799 900 423</b>	2.000	prism wide
	225-500	<b>799 900 425</b>	4.500	prism wide
	63-125	<b>799 150 312</b>	0.270	ratch 25/15/0.7
	110-225	<b>799 150 313</b>	0.232	ratch 25/25/0.7
	110-225	<b>799 150 315</b>	0.496	ratch 35/35/1.1
	225-500	<b>799 150 319</b>	1.415	ratch 50/50/2.1
		<b>799 150 314</b>	0.050	clamping screw

## Clamping device topload 400

- This clamp and mounting tool is used for top-load Saddles on pipes of dimensions d 280 - 400 mm.
- Scope of delivery: 1 base mounting clamp, 1 bracket, 2 clamping screws, 2 ratchet scraps, 1 transport box



PF 2 51 305 008

d-d [mm]	Code	kg
280 - 400	<b>799 350 475</b>	10.010

## Clamping device topload 630

- This clamp and mounting tool is used for top-load Saddles on pipes of dimensions d 280 - 400 mm and branch fittings for dimensions d 280 mm – 630 mm.
- Scope of delivery: 1 base mounting clamp, 1 clamping attachment, 1 bracket, 2 clamping screws, 2 ratchet scraps, 1 transport box



PF 2 51 305 008

d-d [mm]	Code	kg
280 - 630	<b>799 350 477</b>	35.000

## Clamping attachment topload 630

- Clamping attachment as single part for extension of Topload tool 400 (799 350 475)
- Suitable for Branch fittings dimension d 280 mm – 630 mm



PF 2 51 305 008

d-d [mm]	Code	kg
280 - 630	<b>799 350 476</b>	5.000

# Machines & Equipment for Electrofusion

9 150 090



## Spring clamp for ELGEF® 24V reinforcing saddles

- The Spring Clamp is used to install ELGEF® 24 V reinforcing saddles d 40 - 225 mm. The tool ensures a constant jointing pressure during the entire fusion cycle.

d-d [mm]	Code	kg	
40 - 225	<b>799 150 090</b>	1.180	

PF 2 51 305 002

# Machines & Equipment for Electrofusion

## Tapping tools

### Assembly and tapping key For ELGEF Plus saddles



PF 2 51 305 009

Type	Code	kg	Description	
8/10/17	799 198 047	0.798	For all saddles	

### Tapping key for ELGEF Plus saddles

- With adjustable tapping depth.



PF 2 51 305 999

Type	Code	kg	Description	
10	799 198 080	0.114	for Monobloc d 40 mm and d 50 mm	
17	799 198 079	0.556	for Monobloc d 63 mm, d 90 - 160 mm and all Duobloc saddles	
12.7	799 198 091	0.543	for socket with cutter	

### Hexagon key for ELGEF Plus saddles And branch fittings



PF 2 51 305 009

Type	Code	kg	Description	
SW8	799 150 378	0.129	For all saddles and branch fittings	

### Tapping Adapter For ELGEF Plus saddles

- The Adapter is used for gas-free tapping under pressure. Type S 54 for tapping saddles with rotatable outlet d 20 - 40 mm (Tapping Tee d 32 mm). Type S 67 for tapping saddles with rotatable outlet d 50 - 63 mm (Tapping Tee d 63 mm).



PF 2 51 305 002

Type	Code	kg	Description	
S 54	799 100 061	0.785	for Tapping Tee d 32 mm	
S 67	799 100 062	1.011	for Tapping Tee d 63 mm	

### Pressure test cap for ELGEF Plus Tapping saddles



- The cap has a Rp 3/8" connection thread and is made from galvanised steel.
- **Overview of Tapping Adapter types and Pressure Test Cap**
- M For Monoblock d 40 and 50 mm (outlets d 20 - 32 mm)
- S 54 For Monoblock d 63 (outlets d 20 - 32 mm) and all saddles with rotatable outlet (outlets d 20 - 40 mm) i.e. Tapping Tee d 32 mm.
- S 67 For all Saddles with rotatable outlet (outlets d 50 and 63 mm) i.e. Tapping Tee d 63 mm.

Type	Code	kg	Description	
M	799 199 282	0.116	for Monoblock d 40 mm and d 50 mm	
S 54	799 199 283	7.142	for Monoblock d 63 mm and Tapping Tee d 32 mm	
S 67	799 199 286	0.430	for Tapping Tee d 63 mm	

PF 2 51 305 002

# Machines & Equipment for Electrofusion

## Cutter for PE pipes



PF 2 51 305 002

- This cutter is suitable for PE pipes and can be used on pipes of up to d 225 mm with a wall thickness of up to 21 mm.

d [mm]	Code	kg	Description	
39	<b>799 198 012</b>	0.215	accessories Basic Tool Box	

## PE repair plug



PF 2 51 305 002

- PE Repair Plugs are suitable for use with ELGEF® 24 V PE Reinforcement Saddles 53 127 000.

d [mm]	Code	kg	
30	<b>799 199 088</b>	0.012	
39	<b>799 199 089</b>	0.019	

## Hexagon key for PVC saddles



PF 2 51 305 002

- The Hexagon Key is suitable for tapping water and gas mains under pressure.
- Scope of delivery: 1 hexagon key, protective cover, without rotating pin.

d-d [mm]	Code	kg	s [mm]	G [inch]	
16 - 25	<b>799 150 007</b>	0.342	19	30	
32 - 40	<b>799 150 008</b>	0.496	27	38	
50 - 63	<b>799 150 009</b>	0.690	27	47	

# Machines & Equipment for Electrofusion

## Squeeze-off and rerounding tools

9 350 107



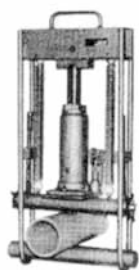
PF 2 51 305 005

### Squeeze-off tool type S1

- This mechanical device is used to squeeze-off PE pipes during repair and extension work. In order not to over-stress the pipe, the tool is equipped with adjustable end stops for SDR 11 (ISO S5) pipes. Due to different wall thickness` of the pipes, the squeezing degree may differ up to 0,8.

d-d [mm]	Code	kg	Description	
20 - 63	<b>799 350 107</b>	4.449	S1 for PE pipes SDR 11	

9 350 108



PF 2 51 305 005

### Squeeze-off tool type S2

- This mechanical device is used to squeeze off PE pipes during repair and extension work. In order not to over-stress the pipe, the tool is equipped with adjustable end stops for SDR 11 (ISO S5) and SDR 17 (ISO S8) pipes.

d-d [mm]	Code	kg	Description	
63 - 180	<b>799 350 108</b>	35.800	S2 for PE pipes SDR 11 and SDR 17	

9 350 270



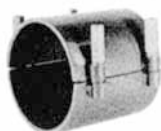
PF 2 51 305 005

### Squeeze-off tool A25

- This mechanical device is used to squeeze off PE pipes during repair and extension work. In order not to over-stress the pipe, the tool is equipped with adjustable end stops for SDR 11 (ISO S5) and SDR 17 (ISO S8) pipes.

d-d [mm]	Code	kg	Description	
160 - 250	<b>799 350 270</b>	60.000	A25 for PE pipes SDR 11 and SDR 17	

9 350 110



PF 2 51 305 005

### Re-rounding clamp

- Re-rounding Clamps are used to re-round pipes after squeezing. They can be left on the squeezed-off part of the pipe as a support if so desired.

d [mm]	Code	kg	
63	<b>799 350 113</b>	3.000	
75	<b>799 350 114</b>	3.600	
90	<b>799 350 115</b>	3.500	
110	<b>799 350 116</b>	5.750	
125	<b>799 350 117</b>	5.690	
160	<b>799 350 118</b>	7.500	
180	<b>799 350 119</b>	27.000	
200	<b>799 350 120</b>	27.500	
225	<b>799 350 121</b>	11.595	
250	<b>799 350 172</b>	34.000	



# Machines & Equipment for Electrofusion

## Re-rounding tool



- Re-rounding tools are used to re-round oval pipes during fusion as well as during the cooling time.

d [mm]	Code	kg	
25	<b>799 199 127</b>	0.577	
32	<b>799 199 128</b>	0.500	
40	<b>799 199 129</b>	1.500	
50	<b>799 199 130</b>	1.616	
63	<b>799 199 131</b>	0.742	
75	<b>799 199 132</b>	0.791	
90	<b>799 199 133</b>	1.690	
110	<b>799 199 134</b>	1.537	
125	<b>799 199 135</b>	1.917	
160	<b>799 199 137</b>	2.318	
180	<b>799 199 138</b>	2.493	
200	<b>799 199 139</b>	2.500	
225	<b>799 199 140</b>	3.000	
250	<b>799 199 141</b>	3.630	

PF 2 51 305 005

## Pressure pad kit



- Complete kit of assembly equipment
- Consists of 3 air pressure pads, control unit with manifold, pressure hoses, strap corset, detailed instruction leaflets and transport case
- For operation with pressurized air up to 10 bar according to EN 292
- Tool for dual use: Pipe re-rounding and fusion pressure reinforcement

d-d [mm]	Code	kg	
560 - 630	<b>799 301 561</b>	32.000	

PF 2 51 305 005

# Machines & Equipment for Electrofusion

## KS Tangit Cleaner

- Special cleaning agent for plastic fusion connections with PP , PE, PVDF and PB.

Code	kg	
799 298 023	0.872	



PF 2 28 473 002

5311

## Tangit KS-Cleaning Tissues

Code	kg	
799 298 024	0.360	



## Marker

Type	Code	kg	
silver	799 350 364	0.010	



PF 2 55 338 999

# Machines & Equipment for Electrofusion

## Accessories for job sites



### Roller support 315

- For pipes up to d 315 mm, with base plate, galvanised
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 300 kg

PF 3 25 117 328

d-d [mm]	Code	kg	
20 - 315	<b>790 109 110</b>	3.599	



### Support 630

- Up to d 630 mm, with base plate, galvanised
- **adjustable height** (60 mm)
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 1000 kg

PF 3 25 117 328

d-d [mm]	Code	kg	
110 - 630	<b>790 109 109</b>	3.943	

# Machines & Equipment for Electrofusion

## PPC Plastic pipe cutter and KS 355

90 10 90



PF 3 25 117 309

### PPC Plastic pipe cutter

- For cutting plastic pipes d10 - d160

d-d [mm]	Article	Code	kg	Closest inch	
10 - 63	PPC 63, s max. = 7.2mm	<b>790 109 001</b>	0.865	1/8 - 2	
50 - 110	PPC 110, s max. = 12.7mm	<b>790 109 002</b>	1.624	1 1/2 - 4	
110 - 160	PPC 160, s max. = 19.0mm	<b>790 109 003</b>	2.212	4 - 6	

90 10 90



PF 3 25 117 909

### Replacement cutting wheels

- for plastic pipe cutter

d-d [mm]	Article	Code	kg	
10 - 63	SR 63 max. s=7,2 mm	<b>790 109 011</b>	0.004	
50 - 110	SR 110/160 max. s=12,7 mm	<b>790 109 012</b>	0.015	
110 - 160	SR 160 max. s=19,0 mm	<b>790 109 013</b>	0.023	

90 20 20



PF 3 25 129 760

### Plastic pipe cutter

- The KS 355 is the ideal tool for simple right angle precision cutting of PVC, PE and PP pipes, Size range d 160 to 355 mm with a wall thickness up to 40 mm. Including transport box.
- Unique clamping mechanism, no additional tools like belts, chains or reduction inserts necessary

d-d [mm]	Code	kg	
160 - 355	<b>790 202 001</b>	28.457	



PF 3 25 119 107

### Saw blade Ø 180x30

Code	kg	
<b>790 202 011</b>	0.450	

# Machines & Equipment for Electrofusion

## KS 1600

### Plastic pipe cutter



The KS 1600 is used for cutting plastic pipes fast, cleanly and properly right-angled from diameter 500 mm up to 1600 mm with a wall thickness of max. 60 mm. For each pipe diameter, the appropriate chain length is necessary. The saw is to be put on the tensioned chain as per user manual which serves as a guiding device for the saw over a full 360° turn.

The guard plate covers the saw blade also during operation and provides full protection for the user at all times.

The KS 1600 basic kit consists of a circular-hand saw, 230 V / 2200 W with carriage, 2 tension chains for d560 mm and d630 mm as well as a chain tensioner. The whole equipment comes in a convenient and robust transport box.

The easy handling and the optimal safety features make this tool indispensable on every building site.

#### Scope of delivery:

1 Circular-hand saw, 1 tensioning chain d560 mm, 1 tensioning chain d630 mm, 1 chain tensioner, 1 hex-wrench size 5, 1 hex-wrench size 6, 1 operating instruction, transport-box

#### Technical data:

Dimension range:	d500 –1600 mm (In combination with the respective tensioning chain)
Plug:	EU-Plug
Voltage:	230 V AC
Power:	2200 Watt
Frequency:	50-60 Hz
Circular saw blade outer-Ø:	240 mm
RPM:	4100
Sound level:	104 dB (A)
Weight saw:	15, 5 kg
Weight KS 1600 Basic-Kit:	43,5 kg
Dimensions saw (WxHxD):	790 x 330 x 335 mm
Dimensions Transport-Box:	950 x 400 x 395 mm

d-d [mm]	Type	Code	kg	
500 - 1600	KS 1600 Basic Kit	790 109 600	43.000	

PF 2 51 305 006

### Saw blade

description	Code	kg	
Saw Blade 240X3,0X30, 18 teeth punched	790 109 618	0.653	

PF 3 25 119 106



### Chain tensioner

- Chain tensioner is included in the scope of delivery of the KS 1600 Basic Kit (790 109 600).

d-d [mm]	Code	kg	
355 - 1600	790 109 616	0.001	

PF 3 25 119 106



### Tensioning Chains

- Chains for d560 and d630 mm are included in the scope of delivery of the KS 1600 Basic-Kit (790 109 600).

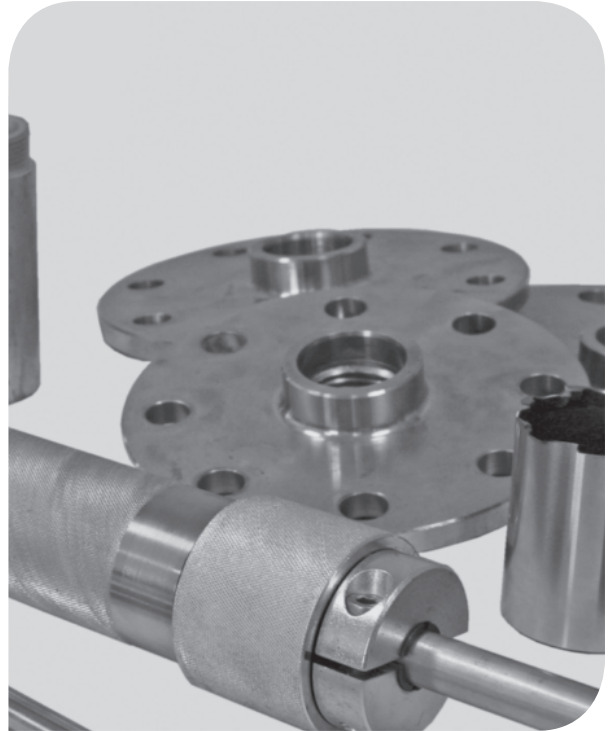
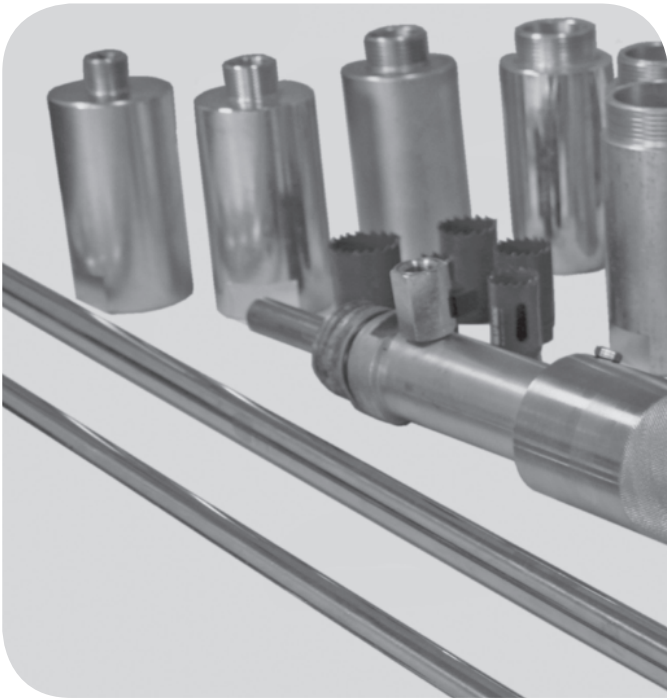
d [mm]	Code	kg	
355	790 109 602	3.700	
400	790 109 603	4.100	
450	790 109 604	4.700	

table continued next page

# Machines & Equipment for Electrofusion

d [mm]	Code	kg	
500	<b>790 109 605</b>	5.200	
560	<b>790 109 606</b>	5.600	
630	<b>790 109 607</b>	6.630	
710	<b>790 109 608</b>	7.900	
800	<b>790 109 609</b>	0.001	
900	<b>790 109 610</b>	10.174	
1000	<b>790 109 611</b>	11.000	
1100	<b>790 109 612</b>	12.000	
1200	<b>790 109 613</b>	13.500	
1400	<b>790 109 614</b>	15.500	
1600	<b>790 109 615</b>	17.800	

PF 3 25 119 106



## **W400/410 drilling device**

# Machines & Equipment for Electrofusion

## W400 drilling device (3/4" - 2")



### Basic Drilling Device W400

including ratchet and drill shaft (accessories to be added)

PF 1 54 326 005

Description	Code	kg	
basic device including ratchet and drill shaft	709 700 000	6.094	

## Male threaded adaptors for W400 drilling device

### Model:

- Suitable to connect to Multi/Saddle Plus 200 and 201 saddles



PF 1 54 326 005

Description	Code	kg	
male threaded adaptor 3/4	709 702 257	1.440	
male threaded adaptor 1	709 702 258	1.720	
male threaded adaptor 1 1/4	709 702 259	1.760	
male threaded adaptor 1 1/2	709 702 260	1.800	
male threaded adaptor 2	709 702 261	1.440	

## Female threaded adaptors for W400 drilling device

### Model:

- Suitable to connect to Multi/Saddle Plus 301 saddles



PF 1 54 326 005

Description	Code	kg	
female threaded adaptor d25 + d32	709 702 262	1.900	
female threaded adaptor d40 + d50	709 702 263	1.750	

## Mandrel combined with pilot drill

### Model:

- mandrel including special pilot drill 6mm with dual retention wires



PF 1 54 326 005

Description	Code	kg	
hole saw mandrel 9/16 inch - 1 3/16 inch with retain pilot drill	709 701 260	0.085	
hole saw mandrel 1 1/4 inch - 6 inch with retain pilot drill	709 701 261	0.206	

## Pilot drill

### Model:

- pilot drill 6 mm with dual retention wires



PF 1 54 326 005

Description	Code	kg	
pilot drill 6 mm with dual retention wires	709 800 006	0.042	

## Cup drill

### PRO-FIT (other sizes on request)

### Model:

- Suitable for PE and PVC pipes



Inch	Description	Code	kg	
11/16	PRO-FIT PE/PVC cutter 17,5 mm	709 810 711	0.030	
3/4	PRO-FIT PE/PVC cutter 19,1 mm	709 810 712	0.034	
7/8	PRO-FIT PE/PVC cutter 22,2 mm	709 810 714	0.046	
1	PRO-FIT PE/PVC cutter 25,4 mm	709 810 716	0.056	

table continued next page



# Machines & Equipment for Electrofusion

PF 1 54 326 005

Inch	Description	Code	kg	
1 1/4	PRO-FIT PE/PVC cutter 31,8 mm	<b>709 810 720</b>	0.096	
1 1/2	PRO-FIT PE/PVC cutter 38,1 mm	<b>709 810 724</b>	0.104	
1 3/4	PRO-FIT PE/PVC cutter 44,5 mm	<b>709 810 728</b>	0.120	
1 7/8	PRO-FIT PE/PVC cutter 48,2 mm	<b>709 810 730</b>	0.128	



## Cup drill Blu-mol HSS

### Model:

- suitable for steel and (ductile) cast iron

Inch	Description	Code	kg	
11/16	HSS bi-metal cutter 17,5 mm	<b>709 810 511</b>	0.300	
3/4	HSS bi-metal cutter 19,1 mm	<b>709 810 512</b>	0.300	
7/8	HSS bi-metal cutter 22,2 mm	<b>709 810 514</b>	0.300	
15/16	HSS bi-metal cutter 23,8 mm	<b>709 810 515</b>	0.300	
1	HSS bi-metal cutter 25,4 mm	<b>709 810 516</b>	0.066	
1 1/8	HSS bi-metal cutter 28,6 mm	<b>709 810 518</b>	0.300	
1 3/16	HSS bi-metal cutter 30,2 mm	<b>709 810 519</b>	0.300	
1 1/4	HSS bi-metal cutter 31,8 mm	<b>709 810 520</b>	0.088	
1 3/8	HSS bi-metal cutter 34,9 mm	<b>709 810 522</b>	0.300	
1 7/16	HSS bi-metal cutter 36,5 mm	<b>709 810 523</b>	0.300	
1 1/2	HSS bi-metal cutter 38,1 mm	<b>709 810 524</b>	0.087	
1 3/4	HSS bi-metal cutter 44,5 mm	<b>709 810 528</b>	0.300	
2	HSS bi-metal cutter 50,8 mm	<b>709 810 532</b>	0.142	

PF 1 54 326 005



## Cup drill Blu-mol Carbide tipped

### Model:

- suitable for abrasive materials such as asbestos cement and cement lined (ductile) iron pipes

Inch	Description	Code	kg	
3/4	carbide tipped HSS bi-metal cutter 19,1 mm	<b>709 810 612</b>	0.300	
7/8	carbide tipped HSS bi-metal cutter 22,2 mm	<b>709 810 614</b>	0.300	
1	carbide tipped HSS bi-metal cutter 25,4 mm	<b>709 810 616</b>	0.070	
1 1/8	carbide tipped HSS bi-metal cutter 28,6 mm	<b>709 810 618</b>	0.300	
1 1/4	carbide tipped HSS bi-metal cutter 31,8 mm	<b>709 810 620</b>	0.096	
1 3/8	carbide tipped HSS bi-metal cutter 34,9 mm	<b>709 810 622</b>	0.300	
1 1/2	carbide tipped HSS bi-metal cutter 38,1 mm	<b>709 810 624</b>	0.300	
1 3/4	carbide tipped HSS bi-metal cutter 44,5 mm	<b>709 810 628</b>	0.300	
2	carbide tipped HSS bi-metal cutter 50,8 mm	<b>709 810 632</b>	0.134	

PF 1 54 326 005



## Heavy duty transport / storage box for W400 drilling device

### Model:

- Including: hex key 3 mm, hex key 6 mm and screwdriver
- Outside dimension transport case: 80 x 40 x 20 cm

Code	kg	Description	
<b>709 706 416</b>	8.100	Heavy duty transport / storage box for W400 drilling device	

PF 1 54 326 005

# Machines & Equipment for Electrofusion

## W410 drilling device (3/4" - 8")

### Basic Drilling Device W410 including ratchet (all accessories to be added)



PF 1 54 326 005

Description	Code	kg	
basic device including ratchet	<b>709 700 100</b>	7.800	

## Drill shafts

### Model:

- Drill shafts to be selected depending on build up length of your configuration



PF 1 54 326 005

Description	Code	kg	
drill shaft 620 mm	<b>709 700 010</b>	1.200	
drill shaft 775 mm	<b>709 700 021</b>	1.500	
drill shaft 920 mm	<b>709 700 022</b>	1.780	
drill shaft 1070 mm	<b>709 700 023</b>	2.070	

## Flange adaptors

### Model:

- Flange adaptor for W410
- Suitable for Plast/Joint® flange adaptor / connection to PE spigot
- Suitable for flange to flange connections
- Not included flange bolts / gasket



PF 1 54 326 005

Description	Code	kg	
flange adaptor DN50	<b>709 702 045</b>	1.850	
flange adaptor DN65	<b>709 702 046</b>	2.400	
flange adaptor DN80	<b>709 702 047</b>	3.090	
flange adaptor DN100	<b>709 702 048</b>	3.840	
flange adaptor DN125	<b>709 702 049</b>	4.870	
flange adaptor DN150	<b>709 702 050</b>	6.530	
flange adaptor DN200	<b>709 702 051</b>	8.800	

## Mandrel combined with pilot drill

### Model:

- mandrel including special pilot drill 6mm with dual retention wires



PF 1 54 326 005

Description	Code	kg	
hole saw mandrel 9/16 inch - 1 3/16 inch with retain pilot drill	<b>709 701 260</b>	0.085	
hole saw mandrel 1 1/4 inch - 6 inch with retain pilot drill	<b>709 701 261</b>	0.206	

## Pilot drill

### Model:

- pilot drill 6 mm with dual retention wires



PF 1 54 326 005

Description	Code	kg	
pilot drill 6 mm with dual retention wires	<b>709 800 006</b>	0.042	

# Machines & Equipment for Electrofusion

## Cup drill

### PE chipless Ø45, Ø60, Ø63, Ø80 and Ø84 mm

#### Model:

- For demanding drillings on PE
- Maximum PE pipe d630 SDR11
- Suitable for under pressure drilling
- Push rod for coupon release out of the cup drill



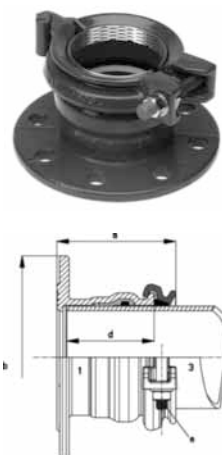
PF 1 54 326 005

Description	Code	kg	
PE cup drill chipless 63 mm x 60 mm	<b>709 810 414</b>	0.590	
PE cup drill chipless 84 mm x 60 mm	<b>709 810 416</b>	0.910	
PE cup drill chipless 63 mm x 120 mm	<b>709 810 424</b>	0.890	
PE cup drill chipless 84 mm x 120 mm	<b>709 810 426</b>	1.370	
PE cup drill push rod	<b>709 700 024</b>	0.400	

## Plast/Joint® 8057 Flange Adaptor, restraint

#### Model:

- For connection to PE Spigot ends
- Ductile Cast iron GGG45 body and clamping ring(s), acc. to EN-GJS-450-10
- RESICOAT® epoxy powder coating, according to GSK standards and EN 14901
- Stainless steel A2 quality (AISI 304) bolts, nuts and washers (optional: A4 quality)
- Gasket: NBR
- Suitable for water and gas
- Flange drilling according to EN 1092-2
- Gripping in brass



PF 1 54 932 001

d [mm]	DN [mm]	Drilling pattern	NBR / A2 Code	kg	a [mm]	b [mm]	PN Water [bar]	PN Gas [bar]	
63	50	PN16	<b>709 257 210</b>	3.647	102	165	16.0	8.0	
75	65	PN16	<b>709 257 212</b>	4.075	102	185	16.0	8.0	
90	80	PN16	<b>709 257 214</b>	4.906	107	200	16.0	8.0	
110	100	PN16	<b>709 257 216</b>	5.998	122	220	16.0	8.0	
125	100	PN16	<b>709 257 218</b>	6.111	126	220	16.0	8.0	
160	150	PN16	<b>709 257 222</b>	11.165	144	285	16.0	8.0	
200	200	PN16	<b>709 257 226</b>	15.902	157	340	16.0	8.0	

## Heavy duty transport / storage box for W410 drilling device

#### Model:

- Including: hex key 3 mm, hex key 6 mm and screwdriver
- Outside dimension transport / warehouse box: 120 x 40 x 40 cm



PF 1 54 326 005

Code	kg	Description	
<b>709 706 414</b>	4.500	Heavy duty transport / storage box for W410 drilling device	



**+GF+**



**Product Range**

Distribution  
Machines for  
Processing Plastic Pipes

Typ	Dimension d (mm)															
	40	50	63	75	90	110	125	140	160	180	200	225	250	280	315	355
	400	450	500	560	630	710	800	900	1000	1200						
TM 160																
TM 250																
TM 315																
GF 400																
KL 500																
GF 500																
KL 630																
GF 630																
GF 800																
GF 1000																
GF 1200																
WM 315																
T - Unit																
Y - Unit																
WM 500																
T - Unit																
Y - Unit																
WM 630																
T - Unit																
Y - Unit																
WM 1200																
T - Unit																
Y - Unit																
KS 355																
KS 1600																
BS 450																
BS 315																
BS 630																
BS 1200																

No responsibility is taken for the correctness of this information.

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 ECO Butt fusion machines

### TM 160 - 250 - 315 ECO Machine complete (wooden crate)



- Flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: lightweight ECO hydraulic unit, flexible base machine, powerful planer, high performance heating element with electronic temperature control box, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 ECO	40 - 160	230V/1900W	<b>790 150 017</b>	120.000	
TM 250 ECO	75 - 250	230V/3270W	<b>790 151 017</b>	193.000	
TM 315 ECO	90 - 315	230V/3870W	<b>790 152 017</b>	207.000	

PF 3 10 597 011

### TM 160 - 250 - 315 Base machine



- Tubular frame provides increased rigidity and easy movement of the machine on the ground
- 4 lifting lugs
- Metal shield provides protection of the main welding area
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Quick-action and drip-proof oil connections located in a protected position
- The base machine can be tilted to achieve a second operating position

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 001</b>	22.000	
TM 250	75 - 250	<b>790 151 001</b>	47.000	
TM 315	90 - 315	<b>790 152 001</b>	52.500	

PF 3 10 597 012

### TM 160 - 250 - 315 ECO Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Reliable torque transmission via robust worm-gear device
- Ergonomic, weight-balanced handling
- Optimised cutting geometry for even and chatter-free planing
- Safety switch to prevent undesired start-up
- Self-locking mechanism in working position
- 115 V on request!

Type	d-d [mm]	Performance	Code	kg	
TM 160 ECO	40 - 160	230V/630W	<b>790 150 014</b>	7.000	
TM 250 ECO	75 - 250	230V/1200W	<b>790 151 014</b>	14.000	
TM 315 ECO	90 - 315	230V/1200W	<b>790 152 014</b>	17.000	

PF 3 10 597 012

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Heating element



- High performance, electronically controlled heating element
- Uniform temperature distribution over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Easy placement in the correct working position with automatic heater release mechanism
- 115 V on request!

Type	d-d [mm]	Performance	Code	kg	
TM 160	40 - 160	230V/1200W	<b>790 114 004</b>	5.402	
TM 250	75 - 250	230V/2000W	<b>790 115 004</b>	7.800	
TM 315	90 - 315	230V/2500W	<b>790 112 083</b>	9.800	

PF 3 25 117 316

## TM 160 - 250 - 315 Case



- For safe storage of planer and heating element

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 295</b>	4.800	
TM 250	75 - 250	<b>790 151 027</b>	8.000	
TM 315	90 - 315	<b>790 152 027</b>	8.800	

PF 3 10 597 012

## TM 160 - 250 - 315 ECO Hydraulic unit



- Clearly visible, vibration-free pressure gauge with precision scaling
- Compact construction with protection frame
- Fine adjustment of pressure
- High pressure consistency during cooling phase
- Fix attached hydraulic hose
- 115 V on request!

Type	Performance	Code	kg	
TM 160 ECO	230V/370W	<b>790 150 013</b>	21.500	
TM 250 - 315 ECO	230V/370W	<b>790 152 009</b>	22.000	

PF 3 10 597 002

## TM 160 - 250 - 315 Temperature controller



- Electronic temperature control
- Accurate adjustment (set point) of heating element temperature
- Digital display of current and set-point temperature
- 115 V on request!

Type	Performance	Code	kg	
TM 160- 315 ECO	230V/3000W	<b>790 152 006</b>	2.000	

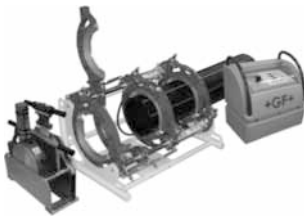
PF 3 10 597 022



# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 TOP Butt fusion machines

### TM 160 - 250 - 315 TOP Machine complete



- High quality, flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: innovative TOP hydraulic unit, flexible base machine, powerful planer, high performance heating element, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 TOP	40 - 160	230V/1900W	<b>790 150 011</b>	125.000	
TM 250 TOP	75 - 250	230V/3270W	<b>790 151 011</b>	204.000	
TM 315 TOP	90 - 315	230V/3870W	<b>790 152 026</b>	217.000	

PF 3 10 597 011

### TM 160 - 250 - 315 Base machine



- Tubular frame provides increased rigidity and easy movement of the machine on the ground
- 4 lifting lugs
- Metal shield provides protection of the main welding area
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Quick-action and drip-proof oil connections located in a protected position
- The base machine can be tilted to achieve a second operating position

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 001</b>	22.000	
TM 250	75 - 250	<b>790 151 001</b>	47.000	
TM 315	90 - 315	<b>790 152 001</b>	52.500	

PF 3 10 597 012

### TM 160 - 250 - 315 TOP Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Reliable torque transmission via robust worm-gear device
- Optimised cutting geometry for even and chatter-free planing
- Ergonomic, weight-balanced handling
- Safety microswitch to prevent undesired start-up
- Self-locking mechanism in working position

Type	Performance	Code	kg	
TM 160 TOP	230V/630W	<b>790 150 000</b>	7.000	
TM 250 TOP	230V/1200W	<b>790 151 000</b>	14.000	
TM 315 TOP	230V/1200W	<b>790 152 000</b>	17.000	

PF 3 10 597 012

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Heating element



PF 3 10 571 500

- High performance, electronically controlled heating element
- Uniform temperature distribution over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Easy placement in the correct working position with automatic heater release mechanism

Type	d-d [mm]	Performance	Code	kg	
TM 160	40 - 160	230V/1200W	<b>790 114 004</b>	5.402	
TM 250	75 - 250	230V/2000W	<b>790 115 004</b>	7.800	
TM 315	90 - 315	230V/2500W	<b>790 112 083</b>	9.800	



PF 3 10 573 500

## TM 160 - 250 - 315 Case

- For safe storage of planer and heating element

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 295</b>	4.800	
TM 250	75 - 250	<b>790 151 027</b>	8.000	
TM 315	90 - 315	<b>790 152 027</b>	8.800	



PF 3 10 597 012

## TM 160 - 250 - 315 TOP Hydraulic unit

- Shock-absorbing plastic housing in attractive design
- Internal aluminium frame providing high rigidity and resistance
- Intuitive control panel provided with digital indication of hydraulic pressure, electronic heating element temperature controller, 2-channel welding timer
- Precise pressure setting and fine adjusting
- Push-button operation of machine carriage
- Pressure release button for safe changeover from equalization to heat soak phase
- Integrated power outlets for planer, heating element
- Integrated additional power socket (230V-AC)
- Integrated interface for welding recorder
- Oil level control and refilling without disassembling the unit

Type	Performance	Code	kg	
TM 160 - 315 TOP	230V/370W	<b>790 151 004</b>	31.000	



PF 3 10 597 022

## TM 160 - 250 - 315 TOP Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Type	Code	kg	
TM 160 - 315 TOP	<b>790 152 003</b>	4.000	

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 WR

### TM 160 - 250 - 315 WR Machine complete



- High quality, flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: innovative TOP hydraulic unit, flexible base machine, powerful planer, high performance heating element, storage case for the planer and heater
- Welding Recorder WR 200 configured to the machine and calibrated to the TOP hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 WR	40 - 160	230V/1910W	<b>790 150 015</b>	136.000	
TM 160 WR CYRILLIC	40 - 160	230V/1910W	<b>790 150 016</b>	136.000	
TM 250 WR	75 - 250	230V/3280W	<b>790 151 015</b>	210.000	
TM 250 WR CYRILLIC	75 - 250	230V/3280W	<b>790 151 016</b>	210.000	
TM 315 WR	90 - 315	230V/3880W	<b>790 152 025</b>	224.000	
TM 315 WR CYRILLIC	90 - 315	230V/3880W	<b>790 152 016</b>	224.000	

PF 3 10 597 011

### WR 200 Fusion welding recording device



The WR 200 assists the welder to ensure the quality of the butt-fusion jointing according to country specific standards. The user is guided through all preparation and fusion steps. The selection of the fusion data like the used material, welding standard, diameter and wall thickness (SDR) is supported by a menu. The complete fusion sequence is supervised and recorded for later print out or transfer to a data base. The recorder with its on-board printer is protected by a hard plastic case of IP 65 protection class. The power and connecting cables are stored in a separate box. The WR 200 can be connected to hydraulically operated butt-fusion machines, even by later retrofitting of machines in service centres .

#### Performance:

- Intuitive user guidance menu
- Welding standard selection e.g. DVS, UNI, WIS, ISO
- Welding process customisable: 4 user defined cycle available
- Additional input of joint number, user identity, job site, order number and GPS coordinates
- Internal memory capacity of up to 250 protocols
- Selection of operator language
- Battery support for an autonomy of 10 hours (no data loss during power interruption)
- Rental and revision period adjustable (CD content of delivery)
- Easy configuration by the end user to the connected GF/KL/TM machine
- Same electrical connections as SUVI® 50 and WR 100 – interchangeable
- Working range: -10°C to +50°C

#### Data Management:

- Internal memory of 250 protocols
- Print out of protocols directly from on-board printer
- Transfer of protocols to USB memory stick
- Protocols in CSV, TXT and SUVI® WIN-WELD compatible formats

Type	Performance	Dimensions [mm]	Code	kg	
WR 200	230 V	350x300x250 mm	<b>790 119 401</b>	5.000	
WR 200 CYRILLIC	230 V	350x300x250 mm	<b>790 119 425</b>	5.500	

PF 3 25 132 100

# Machines & Equipment for Butt Fusion

## Retrofit kits

The retrofit kit consists of all necessary components in the machine in order to connect the WR 100/200. The connection cables between the WR 100/200 and the hydraulic unit/heating element are part of the welding recorder. The installation of the retrofit kit has to be done by a service centre.

Description	Code	kg	
KL 160	<b>790 119 090</b>	0.001	
KL 250-630	<b>790 119 078</b>	0.759	
GF 160-250	<b>790 119 032</b>	0.300	
GF 315	<b>790 119 039</b>	0.790	
GF 500-1200	<b>790 119 036</b>	3.500	

PF 3 25 117 313

# Machines & Equipment for Butt Fusion

## TM 160 - 250- 315 CNC

### Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit and the machine components of the TM TOP machines: sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories !

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions (Relining), special materials etc.).
- Various configuration possibilities, such as cooling time reduction according to the measured ambient temperature (CTC) and automatic bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine).
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Shock absorbing plastic housing in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Accessory).
- Oil level control and refilling without disassembling the unit.
- Two handles to carry the hydraulic unit.

Type	d-d [mm]	Performance	Code	kg	
TM 160 CNC	40 - 160	230V/2000W	<b>790 150 012</b>	125.000	
TM 250 CNC	75 - 250	230V/3150W	<b>790 151 012</b>	195.000	
TM 315 CNC	90 - 315	230V/3750W	<b>790 152 012</b>	215.000	

PF 3 10 597 011

# Machines & Equipment for Butt Fusion

## TM 250 –315 CNC Machine with automatic heating element

### Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit, sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The heating element is ejected automatically from the working position during change-over phase.
- Quick change of the heating element position from the central to the outer welding position when welding e.g. a T-Piece to a pipe.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories!

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions (Relining), special materials etc.).
- Various configuration possibilities such as cooling time reduction according to the measured ambient temperature (CTC) and automatic bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine).
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Shock-absorbing plastic housing in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Accessory).
- Oil level control and refilling without disassembling the unit.
- Two handles to carry the hydraulic unit.

Type	d-d [mm]	Performance	Code	kg	
TM 250 CNC	75 - 250	230V/3150W	<b>790 151 071</b>	195.000	
TM 315 CNC	90 - 315	230V/3750W	<b>790 152 071</b>	230.000	

PF 3 10 597 011

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Accessories

### TM 160 Reduction clamping inserts, wide



- d 40 - 140 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
40	<b>790 114 023</b>	0.280	
50	<b>790 114 009</b>	0.326	
63	<b>790 114 010</b>	0.305	
75	<b>790 114 011</b>	0.290	
90	<b>790 114 012</b>	0.277	
110	<b>790 114 013</b>	0.260	
125	<b>790 114 014</b>	0.265	
140	<b>790 114 015</b>	0.178	

PF 3 25 117 316

### TM 160 Reduction clamping inserts, narrow



- d 40 - 140 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
40	<b>790 114 027</b>	0.318	
50	<b>790 114 016</b>	0.323	
63	<b>790 114 017</b>	0.303	
75	<b>790 114 018</b>	0.276	
90	<b>790 114 019</b>	0.256	
110	<b>790 114 020</b>	0.227	
125	<b>790 114 021</b>	0.192	
140	<b>790 114 022</b>	0.134	

PF 3 25 117 316

### TM 250 Reduction clamping inserts, wide



- d 75 - 225 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
75	<b>790 115 028</b>	0.902	
90	<b>790 115 008</b>	0.940	
110	<b>790 115 009</b>	0.841	
125	<b>790 115 010</b>	0.829	
140	<b>790 115 011</b>	0.647	
160	<b>790 115 012</b>	0.727	
180	<b>790 115 013</b>	0.676	
200	<b>790 115 014</b>	0.733	
225	<b>790 115 015</b>	0.477	

PF 3 25 117 305



# Machines & Equipment for Butt Fusion

## TM 250 Reduction clamping inserts, narrow



- d 75 - 225 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
75	<b>790 115 029</b>	0.768	
90	<b>790 115 016</b>	0.719	
110	<b>790 115 017</b>	0.734	
125	<b>790 115 018</b>	0.661	
140	<b>790 115 019</b>	0.762	
160	<b>790 115 020</b>	0.574	
180	<b>790 115 021</b>	0.561	
200	<b>790 115 022</b>	0.479	
225	<b>790 115 023</b>	0.385	

PF 3 25 117 305

## TM 315 Reduction clamping inserts, wide



- d 90 - 280 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
90	<b>790 112 088</b>	1.000	
110	<b>790 112 089</b>	0.945	
125	<b>790 112 090</b>	0.957	
140	<b>790 112 091</b>	0.950	
160	<b>790 112 092</b>	0.980	
180	<b>790 112 093</b>	0.931	
200	<b>790 112 094</b>	0.880	
225	<b>790 112 095</b>	0.940	
250	<b>790 112 096</b>	0.760	
280	<b>790 112 097</b>	0.750	

PF 3 25 117 307

## TM 315 Reduction clamping inserts, narrow



- d 90 - 280 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

d [mm]	Code	kg	
90	<b>790 112 098</b>	1.265	
110	<b>790 112 099</b>	1.220	
125	<b>790 112 100</b>	1.215	
140	<b>790 112 101</b>	1.139	
160	<b>790 112 102</b>	1.080	
180	<b>790 112 103</b>	1.006	
200	<b>790 112 104</b>	0.945	
225	<b>790 112 105</b>	0.833	
250	<b>790 112 106</b>	0.712	
280	<b>790 112 107</b>	0.562	

PF 3 25 117 307



# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Reduction clamping inserts-set



PF 3 25 117 316

- 4 wide and 4 narrow clamping inserts of each dimension
- Reductions in inch sizes or special diameters upon request

d-d [mm]	Code	kg	
40 - 140	<b>790 114 156</b>	17.000	
75 - 225	<b>790 115 156</b>	63.000	
90 - 280	<b>790 112 156</b>	78.000	

## TM 160 - 250 - 315 Chamfered upper clamp

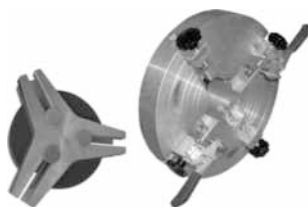


PF 3 10 597 012

- Necessary for welding short-leg bends having diameters equal of the machine dimension: e.g. bend Ø250 mm with a TM 250
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position

Type	Left Code	Right Code	kg	
TM 160	<b>790 150 205</b>	<b>790 150 206</b>	0.800	
TM 250	<b>790 151 205</b>	<b>790 151 206</b>	1.822	
TM 315	<b>790 152 205</b>	<b>790 152 206</b>	2.681	

## TM 160 - 250 - 315 Flange adapter clamping units



PF 3 10 571 500

- For correct clamping and fusion jointing of short-ended stub ends

d-d [mm]	Code	kg	
40 - 160	<b>790 319 007</b>	5.800	
75 - 250	<b>790 115 044</b>	5.594	
90 - 315	<b>790 112 073</b>	11.000	

## TM 160 - 250 - 315 RU Repair unit



PF 3 10 597 012

- Repair unit with 2 clamping devices and a pair of cylinders, especially convenient for butt-fusion joints in narrow trenches or inside of buildings and industrial plants.
- Heating element, planer, hydraulic unit and reduction inserts could be used from the corresponding TM machine.

Type	Code	kg	
RU 160	<b>790 150 045</b>	8.800	
RU 250	<b>790 151 045</b>	18.000	
RU 315	<b>790 152 045</b>	20.000	

## TM 160 - 250 - 315 RU Outer Clamp



PF 3 10 597 012

- An additional clamping device can be mounted on the cylinders to improve the alignment of the components to be welded.

Type	Code	kg	
RU 160	<b>790 150 046</b>	2.000	
RU 250	<b>790 151 046</b>	4.400	
RU 315	<b>790 152 046</b>	5.400	

## TM 160 - 250 - 315 TOP Clamp tightening knobs



PF 3 10 597 022

Type	Code	kg	
TM 160 TOP	<b>790 150 225</b>	1.000	
TM 250 - 315 TOP	<b>790 152 225</b>	0.198	

# Machines & Equipment for Butt Fusion

## TM 160 - 250 - 315 Set planer blades



- (1 set = 2 blades)

d-d [mm]	Code	kg	
40 - 160	<b>790 113 056</b>	0.059	
75 - 250	<b>790 115 024</b>	0.083	
90 - 315	<b>790 112 110</b>	0.056	

PF 3 25 117 311

## TM 160 - 250 - 315 Pipe lifter



- Convenient movement of the welded pipes through the base machine
- Lifting the pipes out of the clamps or inserts, to let the bead pass without blocking
- Supporting the welded pipes on height adjustable rollers
- The pipe lifter could be easily assembled to the base machine
- The delivery contains one left and one right pipe lifter and one lever

Type	Code	kg	
TM 160	<b>790 150 050</b>	9.000	
TM 250	<b>790 151 050</b>	11.000	
TM 315	<b>790 152 050</b>	12.500	

PF 3 10 597 012

## TM 250 - 315 Pressure Shut-Off Valve



- Time saving in the butt fusion process, by working with 2 base machines
- Enabling to disconnect the base machine under pressure from the hydraulic unit during the cooling time
- Close the pressure valve, release pressure at the hydraulic unit, disconnect the hoses from the base machine. Keep the joint cooling down
- Use the cooling time for pipe preparation and welding of the next join by connecting the hydraulic unit hoses to a second base machine

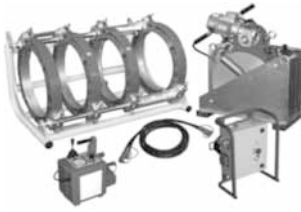
Type	Code	kg	
TM 250 - 315	<b>790 151 002</b>	1.500	

PF 3 10 597 012

# Machines & Equipment for Butt Fusion

## KL 500 TOP1 Butt fusion machine

### Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Control box containing electronic temperature control and power distribution for heating element and planer
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/6250 W	<b>790 340 000</b>	470.561	

PF 3 10 574 100

### Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg	
200 - 500	<b>790 340 001</b>	157.000	

PF 3 10 574 500

### Planer

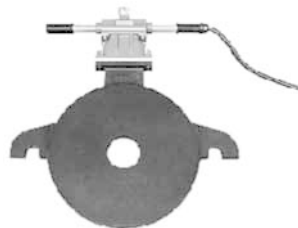


- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/750 W	<b>790 340 002</b>	55.000	

PF 3 10 574 500

### Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/4000 W	<b>790 116 004</b>	25.900	

PF 3 25 117 306

### Control box



- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Voltage	Code	kg	
400 V	<b>790 116 038</b>	15.500	

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## KL 500 TOP2 Butt fusion machine



### Machine complete

- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Machine provided with Hydromat hydraulic unit and remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/6250 W	<b>790 140 010</b>	312.000	

PF 3 10 574 100



### Base machine

- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg	
200 - 500	<b>790 340 001</b>	157.000	

PF 3 10 574 500



### Planer

- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/750 W	<b>790 340 002</b>	55.000	

PF 3 10 574 500



### Heating element

- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/4000 W	<b>790 116 004</b>	25.900	

PF 3 25 117 306



### Remote control

- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg	
<b>790 340 003</b>	3.800	

PF 3 10 574 500



### Case

- For safe storage of planer and heating element

Code	kg	
<b>790 116 006</b>	38.000	

# Machines & Equipment for Butt Fusion

## Hydromat



- Clearly visible, vibration-free pressure gauge with precision scaling
- Fine adjustment of pressure
- High pressure consistency during cooling phase

PF 3 10 574 500

Performance	Code	kg	
230 V/1500 W	<b>790 340 005</b>	31.000	

# Machines & Equipment for Butt Fusion

## KL 500 Accessories



### Reduction clamping inserts, wide

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg	
200	<b>790 116 008</b>	4.217	
225	<b>790 116 009</b>	4.172	
250	<b>790 116 010</b>	3.569	
280	<b>790 116 011</b>	3.612	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.836	
450	<b>790 116 015</b>	3.276	

PF 3 25 117 306



### Reduction clamping inserts, narrow

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg	
200	<b>790 116 016</b>	3.714	
225	<b>790 116 017</b>	3.443	
250	<b>790 116 018</b>	3.936	
280	<b>790 116 019</b>	3.891	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.273	

PF 3 25 117 306



### Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension
- Reductions in inch sizes or special diameters upon request

d-d [mm]	Code	kg	
250 - 450	<b>790 116 156</b>	162.000	

PF 3 25 117 306



### Hoist unit frame

- Hoist unit (consists of frame and swivel arm)
- Mounted to the base machine

Code	kg	
<b>790 116 026</b>	22.000	

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## Weight compensator to hoist unit

- For heating element, planer weight is partially compensated
- For hoist unit 790 116 026



PF 3 25 117 306

Code	kg	
790 116 027	12.500	

## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends



PF 3 25 117 306

d [mm]	Code	kg	
500	790 116 045	22.000	

## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

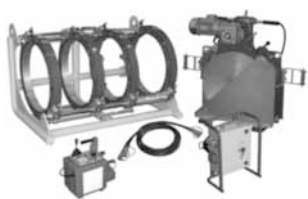


PF 3 25 117 306

Code	kg	
790 116 041	0.700	

# Machines & Equipment for Butt Fusion

## KL 630 TOP1 Butt fusion machine



### Machine complete

- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Control box containing electronic temperature control and power distribution for heating element and planer
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

PF 3 10 575 100

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/11000 W	<b>790 345 000</b>	627.000	



PF 3 10 573 100

### Base machine

- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg	
315 - 630	<b>790 117 002</b>	222.000	



### Planer

- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/1500 W	<b>790 117 003</b>	99.000	



PF 3 10 573 500

### Heating element

- High performance, electronically controlled heating element
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/8000 W	<b>790 117 004</b>	39.000	



PF 3 25 117 319

### Control box

- 400 V
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Code	kg	
<b>790 117 038</b>	27.600	



# Machines & Equipment for Butt Fusion

## KL 630 TOP2 Butt fusion machine

### Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Machine provided with Hydromat hydraulic unit and remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/11000 W	<b>790 345 012</b>	627.000	

PF 3 10 575 100

### Remote control



- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg	
<b>790 340 003</b>	3.800	

### Case

- For safe storage of planer and heating element



Code	kg	
<b>790 117 006</b>	55.000	

# Machines & Equipment for Butt Fusion

## KL 630 Accessories



### Reduction clamping inserts, wide

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.836	
450	<b>790 116 015</b>	3.276	
500	<b>790 117 012</b>	4.500	
560	<b>790 117 013</b>	4.900	

PF 3 25 117 319



### Reduction clamping inserts, narrow

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.273	



### Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts d 315, d 355, d 400, d 450
- 8 wide reduction inserts d 500, d 560

d-d [mm]	Code	kg	
315 - 560	<b>790 117 021</b>	201.000	

PF 3 25 117 319



### Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension

Code	kg	
<b>790 345 233</b>	0.001	

PF 3 10 575 900



### Hoist unit, complete

- Hoist unit (consists of frame and swivel arm)
- Arm length 2m, pivoting, back/forward, max. column height from floor 3.30m
- Electrical unit 400 V / 600 W
- Hoist capacity 250 kg
- 2 hoisting speeds (1,7 m/min. and 7.0 m/min.)

Code	kg	
<b>790 117 023</b>	196.000	

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## Flange adapter clamping unit



PF 3 25 117 319

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg	
630	<b>790 117 029</b>	29.000	



PF 3 25 117 319

## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg	
<b>790 117 041</b>	0.229	

# Machines & Equipment for Butt Fusion

## GF 400 Butt fusion machine

### Machine GF 400 complete, 230 V



- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to SDR 11.
- Machine complete with remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
125 - 400	230 V/5700 W	<b>790 127 001</b>	0.001	

PF 3 25 870 100

### Machine GF 400 complete, 400 V

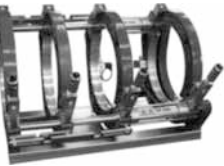


- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to SDR 11.
- Assembled with control box to supply all components with power, only 1 power connection required !
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
125 - 400	400 V/5700 W	<b>790 127 010</b>	355.000	

PF 3 25 870 100

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism to optimize the changeover phase
- For the purpose of welding bends and T-pieces the 2. clamping element is fast and relocatable without losing stability on the guiding shafts
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
125 - 400	<b>790 127 002</b>	95.000	

PF 3 25 117 332

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
125 - 400	230 V/1100 W	<b>790 127 003</b>	47.500	

PF 3 25 117 332

# Machines & Equipment for Butt Fusion

## Heating element



PF 3 25 117 332

- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
125 - 400	230 V/3500 W	<b>790 127 004</b>	15.800	

## Hydraulic unit



PF 3 25 117 332

- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 127 006</b>	40.000	

## Hydraulic hose package



PF 3 25 117 307

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 112 085</b>	4.000	

## Control box



PF 3 25 117 332

- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Performance	Code	kg	
400 V	<b>790 127 008</b>	15.500	

## Case



PF 3 25 117 332

- For safe storage of planer and heating element

Code	kg	
<b>790 127 005</b>	30.000	

# Machines & Equipment for Butt Fusion

## GF 400 CNC Butt fusion machine

### Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit and the machine components of the GF 400 machine: sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories!

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions, special materials etc.).
- The operation procedure can be individually configured by the machine owner, such as: operator ID, job number, traceability code and automated bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine) and for safety reasons additionally in the CNC unit.
- Data transfer to PC (SUWI WIN-WELD software supplied with the machine) via USB interface.
- Robust aluminium case with shock-absorbing plastic cover in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Optional).
- Easy oil-level-control and refilling without opening the unit.

Type	d-d [mm]	Performance	Code	kg	
GF 400 CNC	125 - 400	400 V/5700 W	<b>790 153 001</b>	205.000	

PF 3 10 597 031

# Machines & Equipment for Butt Fusion

## GF 400 Accessories

### Hoist unit



PF 3 25 117 332

- For carrying planer and heating element.
- The weight compensator is mounted at the backside of the base machine.
- Weight compensator included

Code	kg	
790 127 026	28.000	

### Reduction clamping inserts, wide



- d 125-355 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 125/d 140/d 160/d 180/d 200/d 225/d 250/d 280, the reduction clamping insert d 315 mm, code 790 127 101, must also be used

d [mm]	Code	kg	
125	790 112 090	0.957	
140	790 112 091	0.950	
160	790 112 092	0.980	
180	790 112 093	0.931	
200	790 112 094	0.880	
225	790 112 095	0.940	
250	790 112 096	0.760	
280	790 112 097	0.750	
315	790 127 101	3.540	
355	790 127 102	3.540	

PF 3 25 117 332

### Reduction clamping inserts, narrow



- d 125-355 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 125/d 140/d 160/d 180/d 200/d 225/d 250/d 280, the reduction clamping insert d 315 mm, code 790 127 101, must also be used

d [mm]	Code	kg	
125	790 112 100	1.215	
140	790 112 101	1.139	
160	790 112 102	1.080	
180	790 112 103	1.006	
200	790 112 104	0.945	
225	790 112 105	0.833	
250	790 112 106	0.712	
280	790 112 107	0.562	
315	790 127 111	3.540	
355	790 127 112	3.540	

PF 3 25 117 332

### Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension
- Right: bend is clamped right from the heating element position

Description	Code	kg	
Right	790 127 106	0.001	

PF 3 25 117 927

# Machines & Equipment for Butt Fusion

## Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension
- 8 wide clamping inserts d 315 mm
- Reductions in inch sizes or special diameters upon request

PF 3 25 117 332

d-d [mm]	Code	kg	
125 - 355	<b>790 127 156</b>	30.000	



PF 3 25 117 332

## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg	
400	<b>790 127 045</b>	24.600	



PF 3 25 117 307

## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg	
<b>790 112 110</b>	0.056	



# Machines & Equipment for Butt Fusion

## GF 500 Butt fusion machine

### Machine GF 500 complete



- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. Size range d 200-500 mm, for complete pressure range up to PN 16.
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/6250 W	<b>790 116 040</b>	498.000	

PF 3 25 126 200

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism to optimize the changeover phase
- For the purpose of welding bends and T-pieces the 2. clamping element is fast and relocatable without losing stability on the guiding shafts
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg		
200 - 500	<b>790 116 002</b>	169.000		

PF 3 25 126 200

### Planer

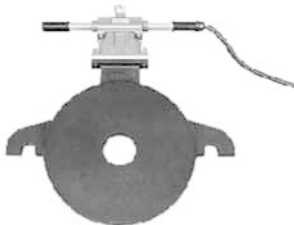


- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/750 W	<b>790 116 003</b>	58.000	

PF 3 25 117 306

### Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/4000 W	<b>790 116 004</b>	25.900	

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 116 039</b>	41.000	

PF 3 25 117 306

## Control box



- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Voltage	Code	kg	
400 V	<b>790 116 038</b>	15.500	

PF 3 25 117 306

## Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 112 085</b>	4.000	

PF 3 25 117 307

## Case



- For safe storage of planer and heating element

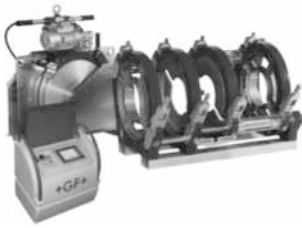
Code	kg	
<b>790 116 006</b>	38.000	

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## GF 500 CNC Butt fusion machine

### Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit and the machine components of the GF 500 machine: sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories!

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions, special materials etc.).
- The operation procedure can be individually configured by the machine owner, such as: operator ID, job number, traceability code and automated bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine) and for safety reasons additionally in the CNC unit.
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Robust aluminium case with shock-absorbing plastic cover in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Optional).
- Easy oil-level-control and refilling without opening the unit.

Type	d-d [mm]	Performance	Code	kg	
GF 500 CNC	200 - 500	400 V/6300 W	<b>790 154 001</b>	480.000	

PF 3 10 597 041

# Machines & Equipment for Butt Fusion

## GF 500 Accessories



### Reduction clamping inserts, wide

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg	
200	<b>790 116 008</b>	4.217	
225	<b>790 116 009</b>	4.172	
250	<b>790 116 010</b>	3.569	
280	<b>790 116 011</b>	3.612	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.836	
450	<b>790 116 015</b>	3.276	

PF 3 25 117 306



### Reduction clamping inserts, narrow

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	Code	kg	
200	<b>790 116 016</b>	3.714	
225	<b>790 116 017</b>	3.443	
250	<b>790 116 018</b>	3.936	
280	<b>790 116 019</b>	3.891	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.273	

PF 3 25 117 306



### Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension
- Reductions in inch sizes or special diameters upon request

d-d [mm]	Code	kg	
250 - 450	<b>790 116 156</b>	162.000	

PF 3 25 117 306

### Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position

description	Code	kg	
Right	<b>790 116 268</b>	0.001	
Left	<b>790 116 269</b>	0.001	

PF 3 25 117 306

# Machines & Equipment for Butt Fusion

## Hoist unit frame



PF 3 25 117 306

- Hoist unit (consists of frame and swivel arm)
- Mounted to the base machine

Code	kg	
790 116 026	22.000	



PF 3 25 117 306

## Weight compensator to hoist unit

- For heating element, planer weight is partially compensated
- For hoist unit 790 116 026

Code	kg	
790 116 027	12.500	



PF 3 25 117 306

## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg	
500	790 116 045	22.000	



PF 3 25 117 306

## 1 Set planer blades

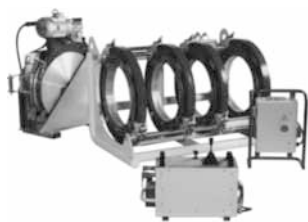
- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg	
790 116 041	0.700	

# Machines & Equipment for Butt Fusion

## GF 630 Butt fusion machine

### Machine GF 630 complete

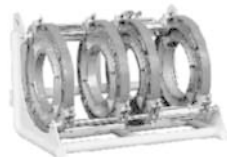


- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE pipes and fittings. Size range d 315-630 mm, for complete pressure range up to PN 16.
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/11000 W	<b>790 117 001</b>	617.000	

PF 3 25 136 100

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
315 - 630	<b>790 117 002</b>	222.000	

PF 3 25 136 100

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/1500 W	<b>790 117 003</b>	99.000	

PF 3 25 117 319

### Heating element



- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/8000 W	<b>790 117 004</b>	39.000	

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Code	kg	
790 116 039	41.000	

## Control box



PF 3 25 117 319

- 400 V
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Code	kg	
790 117 038	27.600	

## Case



PF 3 25 117 319

- For safe storage of planer and heating element

Code	kg	
790 117 006	55.000	

## Hydraulic hose package



PF 3 25 117 307

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
790 112 085	4.000	

# Machines & Equipment for Butt Fusion

## GF 630 CNC Butt fusion machine

### Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit and the machine components of the GF 630 machine: sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories!

### CNC Control Unit

- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions, special materials etc.).
- The operation procedure can be individually configured by the machine owner, such as: operator ID, job number, traceability code and automated bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine) and for safety reasons additionally in the CNC unit.
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Robust aluminium case with shock-absorbing plastic cover in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Optional).
- Easy oil-level-control and refilling without opening the unit.

Type	d-d [mm]	Performance	Code	kg	
GF 630 CNC	315 - 630	400 V/6300 W	<b>790 155 001</b>	615.000	

PF 3 10 597 051



# Machines & Equipment for Butt Fusion

## GF 630 Accessories



### Reduction clamping inserts, wide

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.836	
450	<b>790 116 015</b>	3.276	
500	<b>790 117 012</b>	4.500	
560	<b>790 117 013</b>	4.900	

PF 3 25 117 319



### Reduction clamping inserts, narrow

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.273	



### Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts d 315, d 355, d 400, d 450
- 8 wide reduction inserts d 500, d 560

d-d [mm]	Code	kg	
315 - 560	<b>790 117 021</b>	201.000	

PF 3 25 117 319



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg	
630	<b>790 117 029</b>	29.000	

PF 3 25 117 319



### Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension

Code	kg	
<b>790 345 233</b>	0.001	

PF 3 10 575 900

# Machines & Equipment for Butt Fusion

## Hoist unit, complete

- Hoist unit (consists of frame and swivel arm)
- Arm length 2m, pivoting, back/forward, max. column height from floor 3.30m
- Electrical unit 400 V / 600 W
- Hoist capacity 250 kg
- 2 hoisting speeds (1,7 m/min. and 7.0 m/min.)



PF 3 25 117 319

Code	kg	
790 117 023	196.000	

## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)



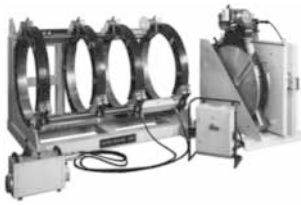
PF 3 25 117 319

Code	kg	
790 117 041	0.229	

# Machines & Equipment for Butt Fusion

## GF 800 Butt fusion machine

### Machine GF 800 complete



- Robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. Size range d 500-800 mm.
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes. Example: PE 100 , SDR 11, dn 800 mm requires a fusion pressure of 106 bar according to DVS 2207 – 1 (0,15 MPa)
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790123016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
500 - 800	400 V/15000 W	<b>790 123 025</b>	1546.000	

PF 3 10 576 100

### Base machine



- Heater release mechanism
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
500 - 800	<b>790 123 023</b>	0.001	

PF 3 10 576 100

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends 400 V/1500 W
- Load transfer via maintenance-free chain drive
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
500 - 800	400 V/1500 W	<b>790 123 003</b>	185.000	

PF 3 25 117 322

### Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
500 - 800	400 V/12000 W	<b>790 123 004</b>	56.000	

PF 3 25 117 322

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	41.000	

PF 3 25 117 319

## Control box



- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Performance	Code	kg	
400 V	<b>790 123 009</b>	29.000	

PF 3 25 117 319

## Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 123 020</b>	0.001	

PF 3 10 576 900

## Case



- For safe storage of planer and heating element

Code	kg	
<b>790 123 007</b>	226.000	

PF 3 25 117 322

# Machines & Equipment for Butt Fusion

## GF 800 Accessories



### Reduction clamping inserts

- d 500 - 710 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 500/d 560, the reduction clamping insert d 630, code 790 123 011 must also be used

d [mm]	narrow Code	wide Code	kg
500	<b>790 117 238</b>	<b>790 117 012</b>	4.500
560	<b>790 117 239</b>	<b>790 117 013</b>	4.900
630	<b>790 123 219</b>	<b>790 123 011</b>	11.000
710	<b>790 123 220</b>	<b>790 123 012</b>	12.500

PF 3 10 576 900

### Reduction clamping inserts-set

- 8 wide clamping inserts dn 500, 560, 630, 710 mm

Code	kg
<b>790 350 019</b>	0.001

PF 3 10 576 500



### Electric Hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg
<b>790 123 016</b>	270.000

PF 3 25 117 322



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d-d [mm]	Code	kg
500 - 800	<b>790 123 029</b>	120.000

PF 3 25 117 322



### 1 Set planer blades

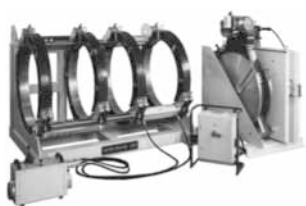
- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg
<b>790 117 041</b>	0.229

PF 3 25 117 319

# Machines & Equipment for Butt Fusion

## GF 1000 Butt fusion machine



### Machine GF 1000 complete

- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- Size range dn 710 – 1000 mm
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes.  
Example: PE 100 ,SDR 11, dn 1000 mm requires a fusion pressure of 130 bar according to DVS 2207 – 1 (0,15 MPa)
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790124016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/19500 W	<b>790 124 025</b>	2528.000	

PF 3 10 577 100



### Base machine

- High precision design, distortion-free and sturdy machine frame
- Heater release mechanism
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
710 - 1000	<b>790 124 023</b>	0.001	

PF 3 10 577 100



### Planer

- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/3000 W	<b>790 124 003</b>	308.000	

PF 3 25 117 323



### Heating element

- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/15000 W	<b>790 124 004</b>	88.000	

PF 3 25 117 323

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	41.000	



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 123 020</b>	0.001	

PF 3 25 117 322



## Control box

- 400 V
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Code	kg	
<b>790 123 009</b>	29.000	

PF 3 25 117 319



## Case

- For safe storage of planer and heating element

Code	kg	
<b>790 124 006</b>	341.000	

PF 3 25 117 323

# Machines & Equipment for Butt Fusion

## GF 1000 Accessories



### Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 710, the reduction clamping insert d 800 mm, code 790 124 011, must also be used

d [mm]	narrow Code	wide Code	kg
710	790 123 220	790 123 012	12.500
800		790 124 011	18.000
900		790 124 012	19.000

### Reduction clamping inserts-set

- 8 wide clamping inserts dn 710, 800, 900 mm

Code	kg
790 355 019	0.001

PF 3 10 577 500

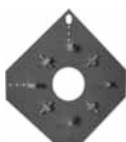


### Electric hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg
790 124 016	300.000

PF 3 25 137 100



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

Code	kg
790 124 029	153.000

PF 3 25 117 323



### 1 Set planer blades

- (1 set = 4 blades)

Code	kg
790 124 021	0.299

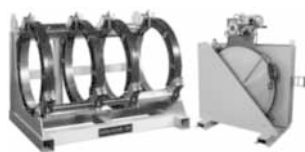
PF 3 25 137 100



# Machines & Equipment for Butt Fusion

## GF 1200 Butt fusion machine

### Machine GF 1200 complete



- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes. Example: PE 100 , SDR 17, dn 1200 mm requires a fusion pressure of 125 bar according to DVS 2207 – 1 (0,15 MPa)
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790125016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
800 - 1200	400 V/20500 W	<b>790 125 025</b>	2932.000	

PF 3 10 578 100

### Base machine



- High precision design, distortion-free and sturdy machine frame
- Heater release mechanism
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Tool set specified to machine

d-d [mm]	Code	kg	
800 - 1200	<b>790 125 023</b>	0.001	

PF 3 10 578 100

### Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free chain drive
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
800 - 1200	400 V/3000 W	<b>790 125 003</b>	335.000	

PF 3 25 117 324

### Heating element



- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface

d-d [mm]	Performance	Code	kg	
800 - 1200	400V/16000 W	<b>790 125 004</b>	101.000	

PF 3 25 117 324

# Machines & Equipment for Butt Fusion

## Hydraulic unit



- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	41.000	

## Control box



- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Performance	Code	kg	
400 V	<b>790 123 009</b>	29.000	

PF 3 25 117 319

## Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 123 020</b>	0.001	

PF 3 25 117 322

## Case



- For safe storage of planer and heating element

Code	kg	
<b>790 125 006</b>	412.000	

PF 3 25 117 324

# Machines & Equipment for Butt Fusion

## GF 1200 Accessories



### Reduction clamping inserts, wide

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 800/d 900, the reduction clamping insert d 1000, code 790 125 011, must also be used.

d [mm]	Code	kg	
800	<b>790 124 011</b>	18.000	
900	<b>790 124 012</b>	19.000	
1000	<b>790 125 011</b>	20.000	

PF 3 25 117 323

### Reduction clamping inserts-set

- 8 wide clamping inserts dn 800, 900, 1000 mm

Code	kg	
<b>790 360 019</b>	0.001	

PF 3 10 578 500



### Electric Hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg	
<b>790 125 016</b>	308.000	

PF 3 25 117 324



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

Code	kg	
<b>790 125 029</b>	231.000	

PF 3 25 117 324



### 1 Set planer blades

- (1 set = 4 blades)

Code	kg	
<b>790 125 021</b>	0.405	

PF 3 25 137 100

# Machines & Equipment for Butt Fusion

## WR 200

### WR 200 Fusion welding recording device



The WR 200 assists the welder to ensure the quality of the butt-fusion jointing according to country specific standards. The user is guided through all preparation and fusion steps. The selection of the fusion data like the used material, welding standard, diameter and wall thickness (SDR) is supported by a menu. The complete fusion sequence is supervised and recorded for later print out or transfer to a data base. The recorder with its on-board printer is protected by a hard plastic case of IP 65 protection class. The power and connecting cables are stored in a separate box. The WR 200 can be connected to hydraulically operated butt-fusion machines, even by later retrofitting of machines in service centres .

#### Performance:

- Intuitive user guidance menu
- Welding standard selection e.g. DVS, UNI, WIS, ISO
- Welding process customisable: 4 user defined cycle available
- Additional input of joint number, user identity, job site, order number and GPS coordinates
- Internal memory capacity of up to 250 protocols
- Selection of operator language
- Battery support for an autonomy of 10 hours (no data loss during power interruption)
- Rental and revision period adjustable (CD content of delivery)
- Easy configuration by the end user to the connected GF/KL/TM machine
- Same electrical connections as SUVI® 50 and WR 100 – interchangeable
- Working range: -10°C to +50°C

#### Data Management:

- Internal memory of 250 protocols
- Print out of protocols directly from on-board printer
- Transfer of protocols to USB memory stick
- Protocols in CSV, TXT and SUVI® WIN-WELD compatible formats

Type	Performance	Dimensions [mm]	Code	kg	
WR 200	230 V	350x300x250 mm	<b>790 119 401</b>	5.000	
WR 200 CYRILLIC	230 V	350x300x250 mm	<b>790 119 425</b>	5.500	

PF 3 25 132 100

### Machines fitted with WR 200



Type	Performance	Code	kg	
TM 160 WR	230V/1910W	<b>790 150 015</b>	136.000	
TM 160 WR CYRILLIC	230V/1910W	<b>790 150 016</b>	136.000	
TM 250 WR	230V/3280W	<b>790 151 015</b>	210.000	
TM 250 WR CYRILLIC	230V/3280W	<b>790 151 016</b>	210.000	
TM 315 WR	230V/3880W	<b>790 152 025</b>	224.000	
TM 315 WR CYRILLIC	230V/3880W	<b>790 152 016</b>	224.000	
GF 400 WR	400V/5710W	<b>790 127 015</b>	350.000	
GF 400 WR	230V/5710W	<b>790 127 020</b>	350.000	
GF 400 WR CYRILLIC	230V/5710W	<b>790 127 021</b>	350.000	
GF 500 WR	400V/6260W	<b>790 116 075</b>	475.000	
GF 500 WR CYRILLIC	400V/6260W	<b>790 116 074</b>	475.000	
KL 500 TOP 1 WR	400V/6260W	<b>790 340 008</b>	475.000	
KL 500 TOP 2 WR	400V/6260W	<b>790 340 035</b>	475.000	
KL 500 TOP 1 WR CYRILLIC	400V/6260W	<b>790 340 011</b>	3.800	
KL 500 TOP 2 WR CYRILLIC	400V/6260W	<b>790 340 036</b>	475.000	
GF 630 WR	400V/11010W	<b>790 117 075</b>	600.000	
GF 630 WR CYRILLIC	400V/11010W	<b>790 345 036</b>	600.000	
KL 630 TOP 1 WR	400V/11010W	<b>790 345 008</b>	600.000	
KL 630 TOP 2 WR	400V/11010W	<b>790 345 035</b>	600.000	
KL 630 TOP 1 WR CYRILLIC	400V/11010W	<b>790 117 074</b>	600.000	
KL 630 TOP 2 WR CYRILLIC	400V/11010W	<b>790 345 011</b>	600.000	
GF 800 WR	400V/15010W	<b>790 123 075</b>	1550.000	
GF 800 WR CYRILLIC	400V/15010W	<b>790 123 074</b>	1550.000	

table continued next page

# Machines & Equipment for Butt Fusion

Type	Performance	Code	kg	
GF 1000 WR	400V/19510W	<b>790 124 075</b>	3000.000	
GF 1000 WR CYRILLIC	400V/19510W	<b>790 124 074</b>	3000.000	
GF 1200 WR	400V/20510W	<b>790 125 075</b>	3210.000	
GF 1200 WR CYRILLIC	400V/20510W	<b>790 125 074</b>	3210.000	

PF 3 10 575 600

## Retrofit kits

The retrofit kit consists of all necessary components in the machine in order to connect the WR 100/200. The connection cables between the WR 100/200 and the hydraulic unit/heating element are part of the welding recorder. The installation of the retrofit kit has to be done by a service centre.

Description	Code	kg	
KL 160	<b>790 119 090</b>	0.001	
KL 250-630	<b>790 119 078</b>	0.759	
GF 160-250	<b>790 119 032</b>	0.300	
GF 315	<b>790 119 039</b>	0.790	
GF 500-1200	<b>790 119 036</b>	3.500	

PF 3 25 117 313

# Machines & Equipment for Butt Fusion

## SUVI System Accessories

### Software PIPE WIN WELD / SUVI WIN WELD



- Professional software for analysis and documentation of installed piping systems or of a defined part of it: i. e. Pipe book. With PIPE WIN WELD it is possible to create a complete electronic documentation of the installed pipes and pipe connection elements. The software works with the data bases of MSA WIN WELD and SUVI WIN WELD. The software makes it possible to work with data from other manufacturers (CSV module for data transfer).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, USB hardlock (PIPE WIN-WELD, PIPE WIN-WELD CSV), installation guide (manuals and additional information on CD-ROM)

PF 3 25 117 312

Type	Code	kg	Description
PIPE CSV	<b>790 119 301</b>	0.180	Complete package incl. CSV module for data transfer, USB hardlock
PIPE	<b>790 119 302</b>	0.180	Complete package, USB hardlock
SUVI	<b>790 119 303</b>	0.180	Complete package



PF 2 51 306 001

### Barcode reader pen

Code	kg	Description
<b>799 350 335</b>	0.165	Barcode reader pen



PF 3 25 117 312

### Memory Card

description	Code	kg
1024 kB/734 records	<b>790 119 157</b>	0.040

# Machines & Equipment for Butt Fusion

## WM 315 Workshop butt fusion machine

### Machine WM 315



- Machine for jointing segmented fittings like bends from d90 - 315 mm for high pressure applications
- To produce T and Y fittings from d90 - 250 mm, special accessories are required

#### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely
- Each clamping tool can be turned a max. 22.5° and assembled with a set of reductions d90 - 280mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- Heating element pull-off mechanism
- Powerful planer (1200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Mechanical stops to provide single sided planing and accurate facing depth
- Planer is secured with a mechanical locking system and a micro switch
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	<b>790 118 060</b>	464.000	

PF 3 25 135 100

### Machine WM 315 CNC



- Machine for jointing segmented fittings like bends from d90 - 315 mm for high pressure applications
- To produce T and Y fittings from d90 - 250 mm, special accessories are required
- Fully automated fusion process by the use of state of the art PLC and touch screen

#### Machine description:

- Highest flexibility in the pipe preparation process
- The heating element is removed automatically during the change-over phase
- Data storage and transfer via USB to the PC
- Data management by SUVI WIN-WELD
- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned a max. 22.5° and assembled with a set of reductions d90 - 280mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- Powerful planer (1200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Mechanical stops to provide single sided planing and accurate facing depth
- Planer is secured with a mechanical locking system and a micro switch
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	<b>790 118 009</b>	465.000	

PF 3 25 135 100

# Machines & Equipment for Butt Fusion

## WM 315 Accessories

### Base clamping unit left for fittings with adapter ring, wide



- For clamping fittings of d315 mm as well as for fastening reduction clamping inserts for fittings d90 to 280 mm. Guide shaft for pipe support und back stop, with pipe support d315 mm
- L = left
- R = right

d [mm]	Type	Code	kg	
315	L	<b>790 118 011</b>	15.000	
315	R	<b>790 118 012</b>	15.000	

PF 3 25 117 318

### Clamping insert, narrow, d 315



- For clamping of elbows, flange adapters, etc., d = 315 mm, 1 piece = 1 Alu-half-shell
- Each code number defines 1 piece reduction clamping insert. Per outer base clamping unit 2 reduction clamping inserts are needed.

d [mm]	Code	kg	
315	<b>790 118 028</b>	0.741	

PF 3 25 117 318

### Set of pipe supports



d-d [mm]	Code	kg	
90 - 280	<b>790 118 025</b>	6.700	

PF 3 25 117 318

### Reduction clamping inserts, narrow



- d 90 - 280 mm
- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg	
90	<b>790 112 098</b>	1.265	
110	<b>790 112 099</b>	1.220	
125	<b>790 112 100</b>	1.215	
140	<b>790 112 101</b>	1.139	
160	<b>790 112 102</b>	1.080	
180	<b>790 112 103</b>	1.006	
200	<b>790 112 104</b>	0.945	
225	<b>790 112 105</b>	0.833	
250	<b>790 112 106</b>	0.712	
280	<b>790 112 107</b>	0.562	

### Back stop



- Prevents the components from slipping out of the clamping device during fusion.

Code	kg	
<b>790 118 026</b>	4.000	

PF 3 25 117 318



# Machines & Equipment for Butt Fusion

## Flange adapter clamping unit



PF 3 25 117 318

- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine
- Packaging included

d-d [mm]	Code	kg	
90 - 315	<b>790 118 031</b>	24.000	

## T-fitting clamping unit



PF 3 25 117 318

- For the rational manufacturing of 90° T-fittings in the sizes d 90 to 250 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- **Complete** with reduction clamping inserts d 90 - 225 mm
- Packaging included

d-d [mm]	Code	kg	
90 - 250	<b>790 118 032</b>	140.000	

## Y-fitting clamping unit



PF 3 25 117 318

- For the rational manufacturing of 30° to 45° Y-fittings in the sizes d 90 to 250 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Reduction clamping inserts d 90 - 225 mm
- Packaging included

d-d [mm]	Code	kg	
90 - 250	<b>790 118 033</b>	175.000	

## Set planer of blades



PF 3 25 117 318

- Blade has 2 cutting edges (1 set = 2 pieces)

description	Code	kg	
long	<b>790 118 042</b>	0.220	
short	<b>790 118 043</b>	0.045	

# Machines & Equipment for Butt Fusion

## WM 500 Plus Workshop butt fusion machine

### Machine WM 500 Plus



- Machine for jointing segmented fittings like bends from d250 - 500 mm for high pressure applications
- To produce T and Y fittings from d250 - 400 mm, special accessories are required

#### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), selection switch for single or double sided planing process, gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d250 - 450 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (10000 W)
- High-quality, PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
250 - 500	400 V/13600 W	<b>790 120 020</b>	0.001	

PF 3 10 581 100

# Machines & Equipment for Butt Fusion

## WM 500 Plus Accessories

### Reduction clamping inserts, narrow

- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg	
250	<b>790 116 018</b>	3.936	
280	<b>790 116 019</b>	3.891	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.273	



### Reduction clamping inserts, wide

- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg	
250	<b>790 116 010</b>	3.569	
280	<b>790 116 011</b>	3.612	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.836	
450	<b>790 116 015</b>	3.276	



### Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	kg	
<b>790 108 026</b>	32.000	



PF 3 25 117 321

### Base clamping unit 500 mm for fittings

- For clamping fittings of d500 mm as well as for the reduction clamping inserts for fittings of d250 to 450 mm. Guide shaft for pipe support and back stop, with pipe support d500 mm
- L = left
- R = right

d [mm]	Type	Code	kg	
500	L	<b>790 120 011</b>	104.000	
500	R	<b>790 120 012</b>	104.000	



PF 3 25 117 320

### Set of pipe supports

d-d [mm]	Code	kg	
250 - 450	<b>790 120 025</b>	10.700	



PF 3 25 117 320

# Machines & Equipment for Butt Fusion

## Flange adapter clamping unit



PF 3 25 117 320

- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine
- Packaging included

d-d [mm]	Code	kg	
250 - 500	<b>790 120 031</b>	73.000	

## T-fitting clamping unit



PF 3 25 117 320

- For the rational manufacturing of 90° T-fittings in the sizes d 250 to 400 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Complete with reduction clamping inserts d 250 - 355 mm
- Packaging included

d-d [mm]	Code	kg	
250 - 400	<b>790 120 032</b>	415.000	

## Y-fitting clamping unit



PF 3 25 117 320

- For the rational manufacturing of 30° to 45° Y-fittings in the sizes d 250 to 400 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Complete with reduction clamping inserts d 250 - 355 mm
- Packaging included

d-d [mm]	Code	kg	
250 - 400	<b>790 120 033</b>	610.000	

## 1 Set planer blades



PF 3 25 117 320

- Blade has 2 cutting edges (1 set = 2 pieces)

Code	kg	
<b>790 117 041</b>	0.229	

# Machines & Equipment for Butt Fusion

## WM 630 Plus Workshop butt fusion machine

### Machine WM 630 Plus



- Machine for jointing segmented fittings like bends from d315 - 630 mm for high pressure applications
- To produce T and Y fittings from d315 - 500 mm, special accessories are required

#### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), selection switch for single or double sided planing process, gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/15600 W	<b>790 108 020</b>	2300.000	

PF 3 25 138 100

# Machines & Equipment for Butt Fusion

## Machine WM 630 CNC



- Machine for jointing segmented fittings like bends from d315 - 630 mm for high pressure applications
- To produce T and Y fittings from d315 - 500 mm, special accessories are required

### Machine description:

- Fully automated fusion process by the use of state of the art PLC and touch screen
- Highest flexibility in the pipe preparation process
- Data storage and transfer via USB to the PC
- Data management by SUVI® WIN-WELD
- Distortion - free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/15600 W	<b>790 108 101</b>	2300.000	

PF 3 25 138 100

# Machines & Equipment for Butt Fusion

## WM 630 Plus Accessories



### Reduction clamping inserts, narrow

- Each code number defines 1 piece of reduction clamping insert.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.273	

PF 3 25 117 319



### Reduction clamping inserts, wide

- Each code number defines 1 piece of reduction clamping insert.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.836	
450	<b>790 116 015</b>	3.276	



### Set of pipe supports

d-d [mm]	Code	kg	
315 - 450	<b>790 108 025</b>	6.000	

PF 3 25 117 321



### Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	kg	
<b>790 108 026</b>	32.000	



### Base clamping unit for fittings

- For clamping fittings of d500 mm as well as for the reduction clamping inserts for fittings of d315 to 450 mm. Guide shaft for pipe support and back stop, with pipe support d500 mm

- L = left
- R = right

d [mm]	Type	Code	kg	
630	L	<b>790 108 017</b>	150.000	
630	R	<b>790 108 018</b>	150.000	

PF 3 25 117 321

# Machines & Equipment for Butt Fusion

## Flange adaptor clamping unit



PF 3 25 117 321

- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine
- Packaging included

d-d [mm]	Code	kg	
315 - 630	<b>790 108 031</b>	200.000	

## T-fitting clamping unit



PF 3 25 117 321

- For the rational manufacturing of 90° T-fittings in the sizes d 315 to 500 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
315 - 500	<b>790 108 032</b>	600.000	

## Y-fitting clamping unit



PF 3 25 117 321

- For the rational manufacturing of 30° to 45° Y-fittings (branches) in the sizes d 315 - 500 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
315 - 500	<b>790 108 033</b>	770.000	

## 1 Set planer blades



PF 3 25 117 321

- (1 set = 4 blades)

Code	kg	
<b>790 108 043</b>	0.518	



# Machines & Equipment for Butt Fusion

## WM 1200 Workshop butt fusion machine

### Machine WM 1200 with SUVI®50



- Machine for jointing segmented fittings like bends from d630 - 1200 mm for high pressure applications
- Professional data recording and operator guidance granted by the use of SUVI® 50
- To produce T and Y fittings from d630 - 900 mm, special accessories are required

#### Machine description:

- Dimensions: 2400 L x 1400 W x 2070 H in mm
- Distortion-free, sturdy machine frame
- Hardened, hard chrome plated linear guide rails for extreme loads
- Electric and hydraulic components separated in the frame
- Moveable control panel assembled with potentiometer to adjust the fusion and the planing pressure, selection switch for single or double sided planing process, gauge, Open, Close and pressure release button, emergency stop
- The data recorder SUVI® 50 is a component of the control panel
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d630 - 1000 mm
- Hydraulically opening and closing of the upper clamping tools
- Hydraulic locking mechanism of the main clamping tools
- Precision heating element with electronic temperature control (30000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- High speed extraction to grant fast change over times
- Powerful planer (2200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
630 - 1200	400 V/41000 W	<b>790 126 001</b>	0.001	

PF 3 25 871 100

# Machines & Equipment for Butt Fusion

## WM 1200 Accessories



### T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 630 - 900 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
630 - 900	<b>790 126 011</b>	2926.000	

PF 3 25 117 334



### Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings (branches) in the sizes d 630 - 900 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
630 - 900	<b>790 126 012</b>	0.100	

PF 3 25 117 334

### X-fitting clamping unit

- To weld a X-piece the T-piece unit is necessary

d-d [mm]	Code	kg	
630 - 900	<b>790 126 013</b>	2900.000	

PF 3 25 117 334

### Base Plate T-Y-X pieces

- To mount the T-Y-X pieces to the support plate

Code	kg	
<b>790 126 014</b>	1000.000	

PF 3 25 117 334



### 1 Set planer blades

- 4 blades mounted on each planer disk
- (1 set = 4 blades)

Code	kg	
<b>790 126 043</b>	0.500	

PF 3 25 117 334

# Machines & Equipment for Butt Fusion

## PPC Plastic pipe cutter and KS 355

### PPC Plastic pipe cutter

- For cutting plastic pipes d10 - d160



PF 3 25 117 309

d-d [mm]	Article	Code	kg	Closest inch	
10 - 63	PPC 63, s max. = 7.2mm	<b>790 109 001</b>	0.865	1/8 - 2	
50 - 110	PPC 110, s max. = 12.7mm	<b>790 109 002</b>	1.624	1 1/2 - 4	
110 - 160	PPC 160, s max. = 19.0mm	<b>790 109 003</b>	2.212	4 - 6	

90 10 90

### Replacement cutting wheels

- for plastic pipe cutter



PF 3 25 117 909

d-d [mm]	Article	Code	kg	
10 - 63	SR 63 max. s=7,2 mm	<b>790 109 011</b>	0.004	
50 - 110	SR 110/160 max. s=12,7 mm	<b>790 109 012</b>	0.015	
110 - 160	SR 160 max. s=19,0 mm	<b>790 109 013</b>	0.023	

90 20 20

### Plastic pipe cutter

- The KS 355 is the ideal tool for simple right angle precision cutting of PVC, PE and PP pipes, Size range d 160 to 355 mm with a wall thickness up to 40 mm. Including transport box.
- Unique clamping mechanism, no additional tools like belts, chains or reduction inserts necessary



PF 3 25 129 760

d-d [mm]	Code	kg	
160 - 355	<b>790 202 001</b>	28.457	

### Saw blade Ø 180x30



PF 3 25 119 107

Code	kg	
<b>790 202 011</b>	0.450	

# Machines & Equipment for Butt Fusion

## KS 1600

### Plastic pipe cutter



The KS 1600 is used for cutting plastic pipes fast, cleanly and properly right-angled from diameter 500 mm up to 1600 mm with a wall thickness of max. 60 mm. For each pipe diameter, the appropriate chain length is necessary. The saw is to be put on the tensioned chain as per user manual which serves as a guiding device for the saw over a full 360° turn.

The guard plate covers the saw blade also during operation and provides full protection for the user at all times.

The KS 1600 basic kit consists of a circular-hand saw, 230 V / 2200 W with carriage, 2 tension chains for d560 mm and d630 mm as well as a chain tensioner. The whole equipment comes in a convenient and robust transport box.

The easy handling and the optimal safety features make this tool indispensable on every building site.

#### Scope of delivery:

1 Circular-hand saw, 1 tensioning chain d560 mm, 1 tensioning chain d630 mm, 1 chain tensioner, 1 hex-wrench size 5, 1 hex-wrench size 6, 1 operating instruction, transport-box

#### Technical data:

Dimension range:	d500 –1600 mm (In combination with the respective tensioning chain)
Plug:	EU-Plug
Voltage:	230 V AC
Power:	2200 Watt
Frequency:	50-60 Hz
Circular saw blade outer-Ø:	240 mm
RPM:	4100
Sound level:	104 dB (A)
Weight saw:	15, 5 kg
Weight KS 1600 Basic-Kit:	43,5 kg
Dimensions saw (WxHxD):	790 x 330 x 335 mm
Dimensions Transport-Box:	950 x 400 x 395 mm

d-d [mm]	Type	Code	kg	
500 - 1600	KS 1600 Basic Kit	790 109 600	43.000	

PF 2 51 305 006

### Saw blade

description	Code	kg	
Saw Blade 240X3,0X30, 18 teeth punched	790 109 618	0.653	

PF 3 25 119 106



### Chain tensioner

- Chain tensioner is included in the scope of delivery of the KS 1600 Basic Kit (790 109 600).

d-d [mm]	Code	kg	
355 - 1600	790 109 616	0.001	

PF 3 25 119 106



### Tensioning Chains

- Chains for d560 and d630 mm are included in the scope of delivery of the KS 1600 Basic-Kit (790 109 600).

d [mm]	Code	kg	
355	790 109 602	3.700	
400	790 109 603	4.100	
450	790 109 604	4.700	

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# Machines & Equipment for Butt Fusion

d [mm]	Code	kg	
500	<b>790 109 605</b>	5.200	
560	<b>790 109 606</b>	5.600	
630	<b>790 109 607</b>	6.630	
710	<b>790 109 608</b>	7.900	
800	<b>790 109 609</b>	0.001	
900	<b>790 109 610</b>	10.174	
1000	<b>790 109 611</b>	11.000	
1100	<b>790 109 612</b>	12.000	
1200	<b>790 109 613</b>	13.500	
1400	<b>790 109 614</b>	15.500	
1600	<b>790 109 615</b>	17.800	

PF 3 25 119 106

# Machines & Equipment for Butt Fusion

## Saws



### BS 450 Belt saw size range d 90 - 450 mm

- For exact cutting of PE, PP, PVC and PVDF plastic pipes, size range d 90 - 450 mm
- Pipe cutter with sturdy tubular steel stand and integrated V-bed
- Variable clamping system for fastening the pipe in the V-bed
- Angles from 0° to 45° to one side can be freely adjusted
- Easy to disassemble into subcomponents and transport to job sites
- Spring-resilient lowering of saw bow
- Easy saw blade replacement system with centering mechanism
- Application: up to d 160 PN 10, up to d 250 PN 6, up to d 450 PN 3,2

PF 3 25 129 700

d-d [mm]	Code	kg	
90 - 450	<b>790 109 045</b>	160.000	



### BS 630 Belt saw

- Angles from 0° to 45° to one side can be freely adjusted
- For exact cutting of PE, PP, PVC and PVDF pipes, size range d 100 - 315 mm and 200 - 630 mm
- Pipe cutter with sturdy tubular steel stand
- Variable clamping system for fastening the pipe in the V-bed
- Spring-resilient lowering of saw bow
- Easy saw blade replacement system with centering mechanism

PF 3 25 129 700

d-d [mm]	Code	kg	
110 - 630	<b>790 109 047</b>	340.000	

### BS Wearing Parts

- Saw belt

PF 3 25 119 105

Article	Code	kg	
BS 450	<b>790 109 046</b>	0.001	
BS 630	<b>790 109 048</b>	0.001	

### Other Belt saws

Code	
on request	

# Machines & Equipment for Butt Fusion

## Tools for pipeline construction

### Outer bead remover



PF 3 25 117 330

d-d [mm]	Code	kg	
110 - 160	<b>790 109 241</b>	1.850	
140 - 250	<b>790 109 242</b>	1.950	
180 - 315	<b>790 109 243</b>	2.697	
280 - 450	<b>790 109 244</b>	2.700	



PF 3 25 117 330

### Replacement blades

d-d [mm]	Code	kg	
110 - 160	<b>790 109 233</b>	0.004	
140 - 315	<b>790 109 234</b>	0.020	

# Machines & Equipment for Butt Fusion

## Accessories for job sites



### Roller support 315

- For pipes up to d 315 mm, with base plate, galvanised
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 300 kg

d-d [mm]	Code	kg	
20 - 315	<b>790 109 110</b>	3.599	

PF 3 25 117 328



### Support 630

- Up to d 630 mm, with base plate, galvanised
- **adjustable height** (60 mm)
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 1000 kg

d-d [mm]	Code	kg	
110 - 630	<b>790 109 109</b>	3.943	

PF 3 25 117 328



# Machines & Equipment for Butt Fusion

## Miscellaneous accessories

### Timer with 2 stop times



PF 3 25 117 316

Code	kg	
790 114 028	0.088	

### KS Tangit Cleaner

- Special cleaning agent for plastic fusion connections with PP, PE, PVDF and PB.



PF 2 28 473 002

Code	kg	
799 298 023	0.872	

5311

### Tangit KS-Cleaning Tissues



Code	kg	
799 298 024	0.360	

### Marker



PF 2 55 338 999

Type	Code	kg	
silver	799 350 364	0.010	

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# General Condition of Supply of Georg Fischer Piping Systems Limited, Schaffhausen

## 1 General

- 1.1 These General Conditions shall apply to all Products supplied by Georg Fischer to the Purchaser. They shall also apply to all future business even when no express reference is made to them.
- 1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.
- 1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

## 2 Tenders

Tenders shall only be binding if they contain a specifically stated period for acceptance.

## 3 Scope of Delivery

- 3.1 Georg Fischer's product range is subject to change.
- 3.2 The confirmation of order shall govern the scope and execution of the contract.

## 4 Data and Documents

- 4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.
- 4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

## 5 Confidentiality, Protection of Personal Data

- 5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied.
- 5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc.

## 6 Local Laws and Regulations, Export Controls

- 6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.
- 6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

## 7 Price

- 7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms of the ICC, latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and importlicences etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.
- 7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

## 8 Terms of Payment

- 8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.
- 8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser. In particular, payment shall still be made when unessential items are still out-standing provided that the Products already delivered are not rendered unusable as a result.

## 9 Retention of Title

- 9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.
- 9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.
- 9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

## 10 Delivery

- 10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.
- 10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:
  - a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.
  - b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially unpractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads.  
Should the effect of force majeure exceed a period of six months, either party may cancel the contract forthwith.  
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting therefrom, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.
  - c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.
- 10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one month which equally is not met.  
The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.
- 10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.
- 10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.
- 10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to liquidated damages in the amount of 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved. Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage.

## 11 Packing

If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

## 12 Passing of Risk

- 12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works (EX WORKS, Incoterms ICC, latest version), even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.
- 12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

## 13 Carriage and Insurance

- 13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.
- 13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.
- 13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible.  
In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.
- 13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six days after receipt of the Products.

## 14 Inspection, Notification of Defects and Damages

- 14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.
- 14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within 7 working days after discovery, in any event within the agreed warranty period.
- 14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.
- 14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

## 15 Warranty

- 15.1 At the written request of the Purchaser, Georg Fischer undertake to repair or replace at their discretion, as quickly as possible and free of charge all Products supplied which demonstrably suffer from faulty design, materials or workman-ship or from faulty operating or installation instructions.  
In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via [www.piping.georgfischer.com](http://www.piping.georgfischer.com).  
Replaced parts shall become property of Georg Fischer.
- 15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.
- 15.3 The Purchaser shall be entitled to cancel the contract or to demand a reduction in the contract price if also a second attempt to repair or replace the Products has failed.
- 15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.
- 15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.
- 15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.
- 15.7 In case of Products for use in domestic installations or in utilities
  - Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object as well as, in case of negligence, all other direct damages caused by the defective Product (damage to property and injury to or death of persons) up to CHF 1 000 000 per occurrence.
  - the statute of limitations for warranty or damage claims - contrary to Section 15.6 - will be 5 years from the date of installation.

## 16 Limitation of Liability

All cases of breach of contract and the relevant consequences as well as all rights and claims on the part of the customer, irrespective on what ground they are based, are exhaustively covered by these general conditions of supply. In particular, any claims not expressly mentioned for damages, reduction of price, termination of or withdrawal from the contract are excluded. In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit and other direct or indirect or consequential damage. This exclusion of liability, however, does not apply to unlawful intent or gross negligence on the part of Georg Fischer and in case of strict liability under applicable product liability statutes, but does apply to unlawful intent or gross negligence of persons employed or appointed by Georg Fischer to perform any of its obligations.

## 17 Severability

Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

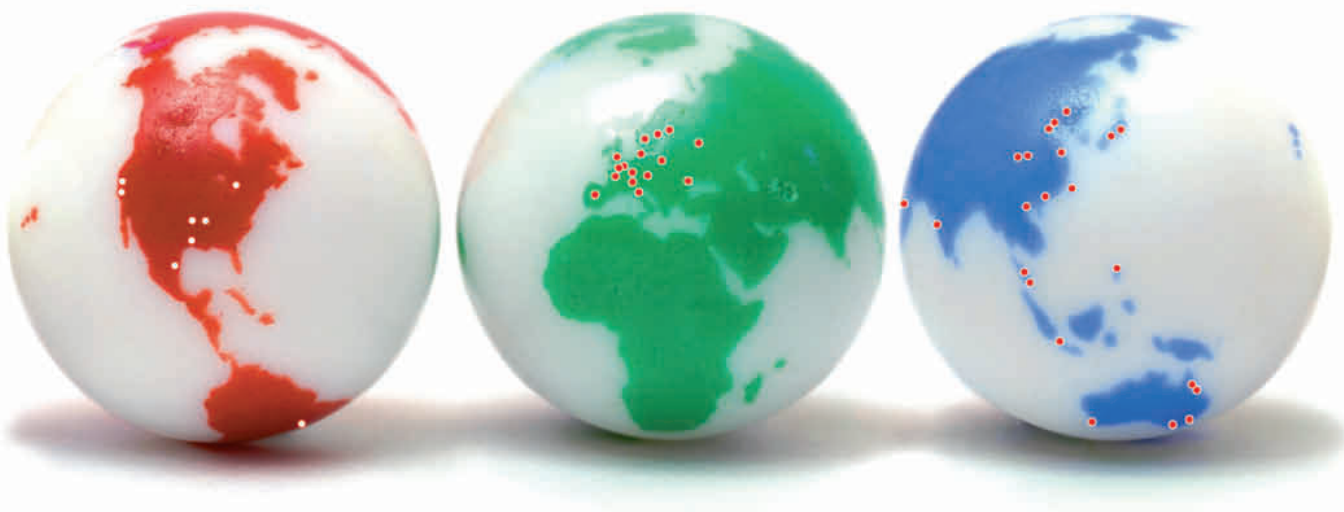
## 18 Place of Performance and Jurisdiction

- 18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.
- 18.2 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland.  
Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.
- 18.3 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.

# GF Piping Systems – worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.

[www.piping.georgfischer.com](http://www.piping.georgfischer.com)



The technical data is not binding. They neither constitute expressly warranted characteristics nor guaranteed properties nor a guaranteed durability. They are subject to modification. Our General Terms of Sale apply.

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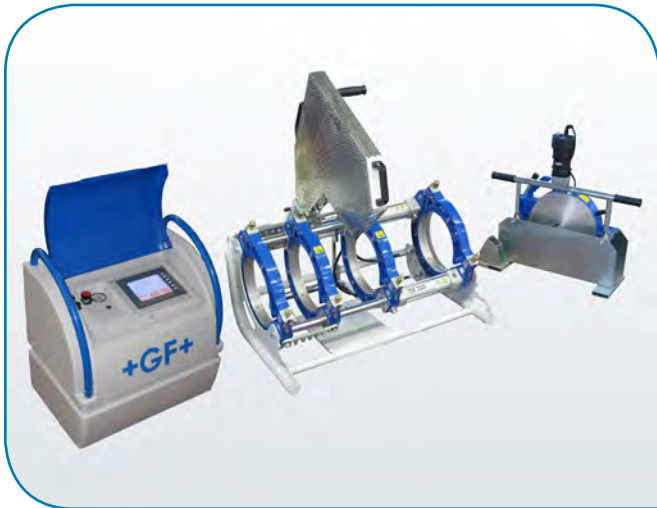
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## Product Catalogue 2011

Machines & Tools for  
Installation of Plastic Pipes

# PIPE WIN-WELD®

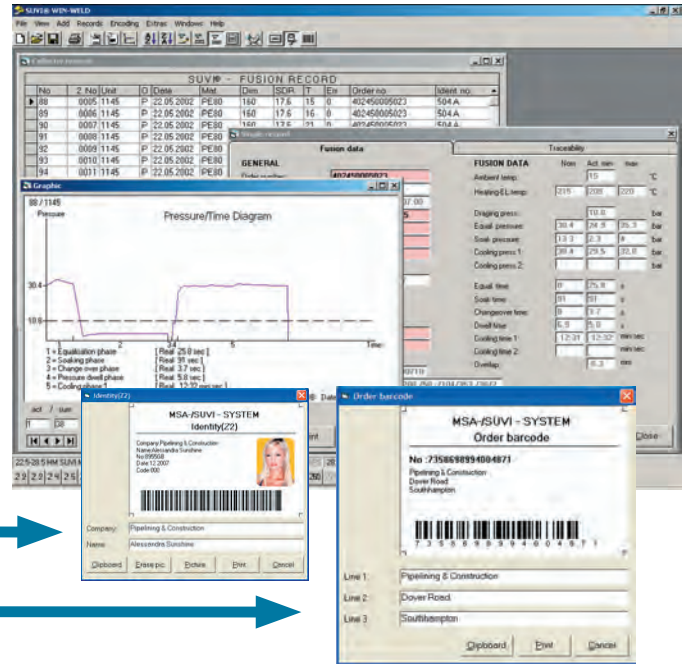
The software package for an electronic based universal piping system documentation on the basic of ISO 12176-4

# MSA WIN-WELD

These software packages are used for the data transfer with the MSA electro fusion units and the CNC line butt fusion machines.

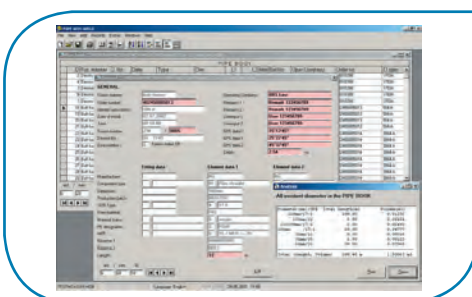
- traceability data of the jointed components
- welding parameters
- operator ID
- job number
- additional remarks

Barcodes according to the current standards  
generated in the software package  
MSA or SUVI WIN-WELD.



## Your Advantages:

- By using the **PIPE WIN-WELD® Software** package your documentation of a piping system will be complete, including welds, installed components and pipes.
- Mechanical joints and components can be manually added.
- Data from other fusion machine manufacturers can be transferred via the CSV-module.



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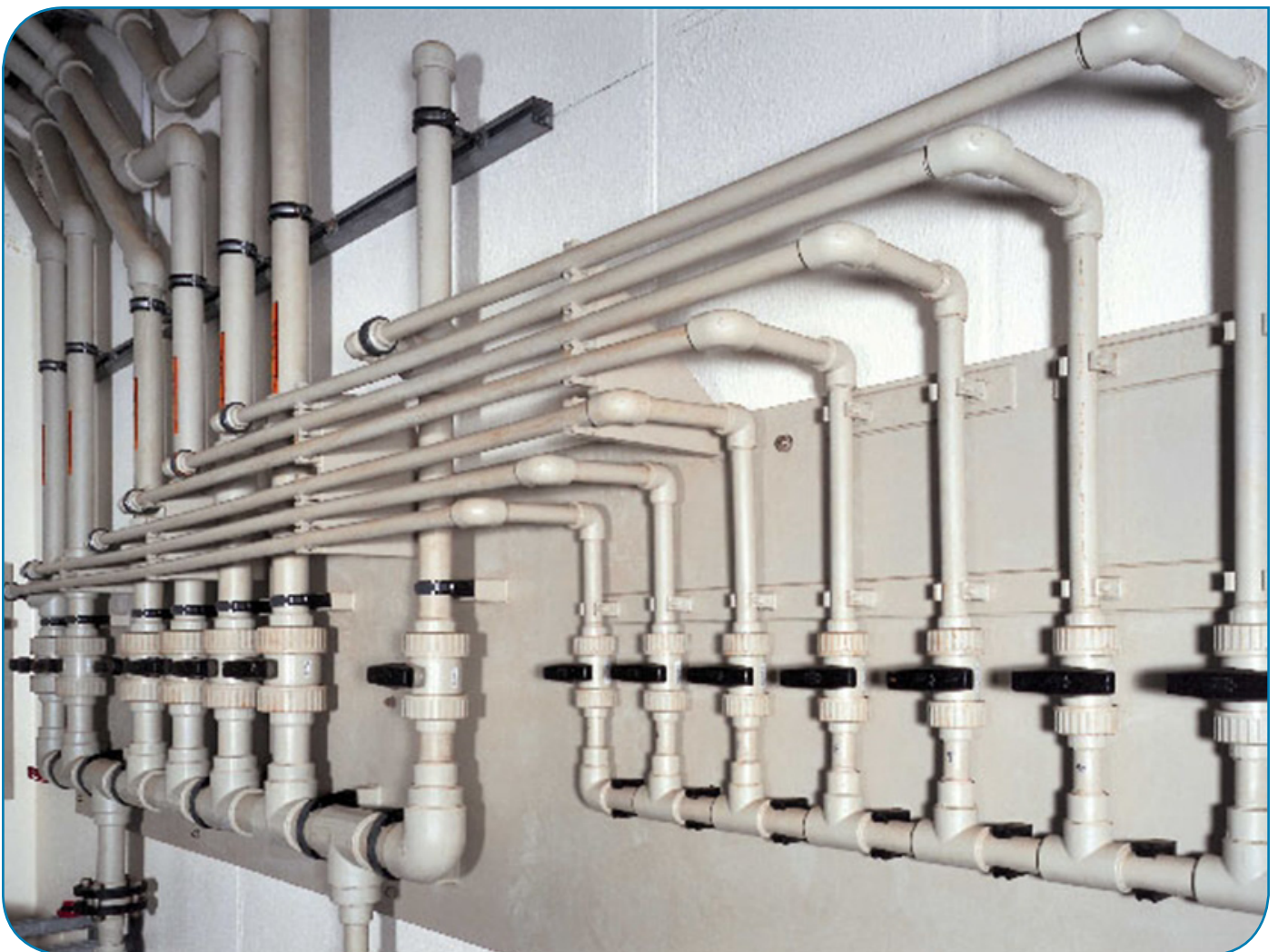
Saws    Cutter    Chamfering tools    Outer bead remover

## Industrial and plant construction machines

- **SSE/MSE** Manual fusion tools
- **MC 110** Butt fusion machine
- **Weld 160/250** Butt fusion machines
- **PSO 701** Butt fusion machine
- **SG 125 - 315** Socket-/Butt fusion machine

Universal machines and tools for the use in industrial, building technology and sanitary applications.

The machines are portable and due to the design (e.g. MC 110) suitable to weld in difficult locations.





# Manual fusion tools

## SSE Butt fusion tool



- All devices equipped with on/off switch, mains and temperature control lamp
- Choice of electronic or thermostatic temperature control
- Heating element diameter 120 mm, 200 mm and 300 mm
- The SSE 120 heater plate is bent 45°
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- T = thermostatic temperature control / E = electronic temperature control

d [mm]	Type	Performance	Code	kg	
110	SSE 120 T	230 V/400 W	<b>790 105 051</b>	3.300	
110	SSE 120 E	230 V/400 W	<b>790 105 058</b>	2.400	
110	SSE 120 T	115 V/400 W	<b>790 105 136</b>	2.300	
110	SSE 120 E	115 V/400 W	<b>790 105 141</b>	2.400	
180	SSE 200 T	230 V/800 W	<b>790 105 052</b>	3.000	
180	SSE 200 E	230 V/800 W	<b>790 105 059</b>	3.000	
180	SSE 200 T	115 V/800 W	<b>790 105 137</b>	3.000	
180	SSE 200 E	115 V/800 W	<b>790 105 142</b>	3.000	
280	SSE 300 T	230 V/1500 W	<b>790 105 053</b>	4.780	
280	SSE 300 E	230 V/1500 W	<b>790 105 060</b>	5.640	
280	SSE 300 T	115 V/1500 W	<b>790 105 138</b>	5.540	
280	SSE 300 E	115 V/1500 W	<b>790 105 143</b>	5.640	

## SSE 200 -Set- Butt fusion tool



- All devices equipped with on/off switch, mains and temperature control lamp
- Choice of electronic or thermostatic temperature control
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- Available as a complete set in a practical metal case
- Heating element-diameter 200 mm
- Table clamp
- T = thermostatic temperature control / E = electronic temperature control

d [mm]	Type	Performance	Code	kg	
180	SSE 200 T	230 V/800 W	<b>790 105 054</b>	7.700	
180	SSE 200 E	230 V/800 W	<b>790 105 061</b>	7.700	
180	SSE 200 T	115 V/800 W	<b>790 105 139</b>	7.700	
180	SSE 200 E	115 V/800 W	<b>790 105 144</b>	7.700	

## SSE 300 -Set- Butt fusion tool



- All devices equipped with on/off switch, mains and temperature control lamp
- Choice of electronic or thermostatic temperature control
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- Available as a complete set in a practical metal case
- Heating element-diameter 300 mm
- Table clamp
- T = thermostatic temperature control / E = electronic temperature control

d [mm]	Type	Performance	Code	kg	
280	SSE 300 T	230 V/1500 W	<b>790 105 055</b>	11.000	
280	SSE 300 E	230 V/1500 W	<b>790 105 062</b>	11.000	
280	SSE 300 T	115 V/1500 W	<b>790 105 140</b>	11.000	
280	SSE 300 E	115 V/1500 W	<b>790 105 145</b>	11.000	



## MSE 63/MSE 110 Socket fusion tools

- For fusion jointing of PP, PE and PVDF pipes and fittings
- Choice of electronic or thermostatic temperature control
- Support for heating bushes and spigots of d 16 to 63 mm (110 mm)
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- T = thermostatic temperature control / E = electronic temperature control

d-d [mm]	Type	Performance	Code	kg	
16 - 63	MSE 63 T	230 V/800 W	<b>790 105 081</b>	1.700	
16 - 63	MSE 63 E	230 V/800 W	<b>790 105 082</b>	1.800	
16 - 63	MSE 63 T	115 V/800 W	<b>790 105 096</b>	2.075	
16 - 63	MSE 63 E	115 V/800 W	<b>790 105 097</b>	2.145	
16 - 110	MSE 110 T	230 V/1500 W	<b>790 105 083</b>	3.200	
16 - 110	MSE 110 E	230 V/1500 W	<b>790 105 084</b>	3.200	
16 - 110	MSE 110 T	115 V/1500 W	<b>790 105 126</b>	3.200	
16 - 110	MSE 110 E	115 V/1500 W	<b>790 105 127</b>	3.200	



## MSE 63/MSE 110 - Set - Socket fusion tools

- For fusion jointing of PP, PE and PVDF pipes and fittings
- All devices equipped with on/off switch, mains and temperature control lamp
- Choice of electronic or thermostatic temperature control
- Support for heating bushes and spigots of d 16 to 63 mm (110 mm)
- Pick up for floor stand or table clamp
- High-quality, non-stick PTFE-coating with long service life
- Monitoring and setting of heating element temperature
- High temperature accuracy over the entire heating surface
- Heating bushes and spigots
- Available as a complete set in a practical metal case
- Table clamp
- Floor stand for MSE 63
- Allen screws and key
- T = thermostatic temperature control / E = electronic temperature control

d-d [mm]	Type	Performance	Code	kg	
16 - 63	MSE 63 T	230 V/800	<b>790 105 085</b>	3.946	
16 - 63	MSE 63 E	230 V/800	<b>790 105 086</b>	3.946	
16 - 63	MSE 63 T	115 V/800	<b>790 105 098</b>	3.901	
16 - 63	MSE 63 E	115 V/800	<b>790 105 099</b>	3.901	
16 - 110	MSE 110 T	230 V/1500	<b>790 105 087</b>	8.029	
16 - 110	MSE 110 E	230 V/1500	<b>790 105 088</b>	8.029	
16 - 110	MSE 110 T	115 V/1500	<b>790 105 128</b>	8.029	
16 - 110	MSE 110 E	115 V/1500	<b>790 105 129</b>	8.029	

# Accessories/Wearing parts for manual fusion tools

## Metal case



Article	Code	kg	
SSE 200	<b>790 105 056</b>	4.421	
SSE 300	<b>790 105 057</b>	4.700	
MSE 63	<b>790 105 089</b>	4.000	
MSE 110	<b>790 105 090</b>	7.000	

## Floor stand for manual fusion tools SSE/MSE



Code	kg	
<b>790 105 063</b>	0.380	

## Table clamp for SSE/MSE

- For correct placement of heater



Code	kg	
<b>790 109 315</b>	0.660	

## Heating spigots and bushes

- Aluminium, PTFE coated
- Type B according to DVS 2208-1 (mechanical calibrated pipe ends)
- Always delivered in pairs (also usable for SG 110, SG 125, not for SG 160)



d [mm]	Code	kg	
16	<b>799 300 155</b>	0.085	
20	<b>799 300 156</b>	0.115	
25	<b>799 300 157</b>	0.155	
32	<b>799 300 158</b>	0.225	
40	<b>799 300 159</b>	0.230	
50	<b>799 300 160</b>	0.335	
63	<b>799 300 161</b>	0.600	
75	<b>799 300 162</b>	0.965	
90	<b>799 300 163</b>	1.440	
110	<b>799 300 164</b>	2.210	

# MC 110 Butt fusion machine

## Machine MC 110, with electric planer, thermostatic heater



- Portable butt fusion machine for use in the workshop and on job sites. For fusion jointing of PP and PE pipes and fittings as well as prefabrication of segments in the size range d 20 - 110 mm and up to SDR 11.
- Machine MC 110 complete includes: machine mounting, base machine, 2 base clamping plates (wide), base clamping plate (left narrow), electrically operated planer, thermostatic controlled heater, table clamp and transport box.
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
20 - 110	230V/1360W	<b>790 109 303</b>	31.000	
20 - 110	115V/1360W	<b>790 109 321</b>	31.000	

## Machine MC 110, with electric planer, electronic heater



- Portable butt fusion machine for use in the workshop and on job sites. For fusion jointing of PP and PE pipes and fittings as well as prefabrication of segments in the size range d 20 - 110 mm and up to SDR 11.
- Machine MC 110 complete includes: machine mounting, base machine, 2 base clamping plates (wide), base clamping plate (left narrow), electrically operated planer, electronic controlled heater, table clamp and transport box
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
20 - 110	230V/1360W	<b>790 109 347</b>	31.000	

## Machine MC 110, with manual planer, thermostatic heater



- Portable butt fusion machine for use in the workshop and on job sites. For fusion jointing of PP and PE pipes and fittings as well as prefabrication of segments in the size range d 20 - 110 mm and up to SDR 11.
- Machine MC 110 complete includes: machine mounting, base machine, 2 base clamping plates (wide), base clamping plate (left narrow), manually operated planer, thermostatic controlled heater, table clamp and transport box
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
20 - 110	230V/800W	<b>790 109 301</b>	31.000	
20 - 110	115V/800W	<b>790 109 320</b>	31.000	

## Machine MC 110, with manual planer, electronic heater



- Portable butt fusion machine for use in the workshop and on job sites. For fusion jointing of PP and PE pipes and fittings as well as prefabrication of segments in the size range d 20 - 110 mm and up to SDR 11.
- Machine MC 110 complete includes: machine mounting, base machine, 2 base clamping plates (wide), base clamping plate (left narrow), manually operated planer, electronic controlled heater, table clamp and transport box
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
20 - 110	230V/800W	<b>790 109 348</b>	31.000	





## Machine mounting

- For mounting the basic machine and fastening the complete MC 110 on the work-bench

d-d [mm]	Code	kg	
20 - 110	<b>790 109 306</b>	0.851	



## Base machine

- With spring resistance for pressure build-up and tool set

d-d [mm]	Code	kg	
20 - 110	<b>790 109 307</b>	6.034	



## Base clamping plate, wide

- 110 mm for pipe/pipe joints
- For mounting the wide reduction clamping inserts
- Freely adjustable (max. 15°)

d [mm]	Code	kg	
110	<b>790 109 308</b>	2.312	



## Base clamping plate, left narrow

- 110 mm for fitting/pipe joints
- For mounting the narrow reduction clamping inserts
- Freely adjustable (max. 15°)

d [mm]	Code	kg	
110	<b>790 109 309</b>	0.945	



## Planer, electrically operated

- Centre of planing radial adjustable.

d-d [mm]	Performance	Code	kg	
20 - 110	230V/560W	<b>790 109 312</b>	4.845	
20 - 110	115V/560W	<b>790 109 324</b>	4.900	



## Planer, manually operated

- With ratchet mechanism
- Stops on guide shaft can be locked
- Cutting blades sharpened on both sides

d-d [mm]	Code	kg	
20 - 110	<b>790 109 311</b>	2.266	



## Heater

- Thermostatic or electronic temperature control
- Including machine mounting
- Control lamps (power, status)
- PTFE coating

d-d [mm]	Performance	description	Code	kg	
20 - 110	230V/800W	thermostatic	<b>790 109 313</b>	2.556	
20 - 110	230V/800W	electronic	<b>790 109 314</b>	2.556	
20 - 110	115V/800W	thermostatic	<b>790 109 322</b>	2.600	
20 - 110	115V/800W	electronic	<b>790 109 323</b>	2.600	



**Table clamp**

Code	kg	
790 109 315	0.660	



**Transport crate**

Code	kg	
790 109 317	14.000	

# MC 110 Accessories

## Reduction clamping inserts



- 20 - 90 mm
- Each code number defines 1 half shell. Per wide base clamping plate 2 reduction half-shells are needed.

d [mm]	wide Code	narrow Code	kg	
20	790 109 326	790 109 334	0.130	
25	790 109 327	790 109 335	0.139	
32	790 109 328	790 109 336	0.136	
40	790 109 329	790 109 337	0.131	
50	790 109 330	790 109 338	0.124	
56	790 109 342	790 109 343	0.115	
63	790 109 331	790 109 339	0.110	
75	790 109 332	790 109 340	0.098	
90	790 109 333	790 109 341	0.077	

## Set reduction clamping inserts



- The set for the wide clamps contains 4 half shells of each dimension
- The set for the narrow clamp contains 2 half shells of each dimension

d-d [mm]	wide Code	narrow Code	kg	
20 - 90	790 300 019	790 300 029	6.000	

## Base clamping plate, right narrow



- 110 mm for fitting/pipe joints
- For mounting the narrow reduction clamping inserts
- Freely adjustable (max. 15°)

d [mm]	Code	kg	
110	790 109 310	0.945	

## Flange adapter clamping unit



- For correct clamping and fusion jointing of short-ended stub ends

d-d [mm]	Code	kg	
25 - 110	790 109 316	1.630	

## Replacement blades



- Sharpened on both sides (1 set = 2 pieces)

description	Code	kg	
short	790 118 043	0.045	

## Weld 160 Butt fusion machine

**For fusion jointing of PP and PE pipes and fittings, size range d 40 - 160 mm**



- Economical, lightweight plastic fusion machine for mobile use. Suitable for plumbing installations, roof drainage systems and drainage pipes.
- **Base machine** for butt fusion from d 40 up to d 160 mm, max. d 160, SDR 26. Sliding carriages, pressure device 600 N scale. Support for heating element.
- **Base clamping plates** right and left, d 160 mm
- **Reduction clamping inserts** d 40 - 140 mm
- **V-shaped pipe support** with inserts d 40 - 140 mm
- **Compact Planer** with reversible plates.
- **Heating element** thermostatic controlled, PTFE coated, electric cable with plug. Can also be used as a manual tool.
- **Steel frame** used for operation and transportation protection.

d-d [mm]	Performance	Code	kg	
40 - 160	230 V/1350 W	<b>790 301 020</b>	51.900	
40 - 160	115 V/1350 W	<b>790 301 021</b>	65.000	

## Weld 250 Butt fusion machine

**For fusion jointing of PP and PE pipes and fittings, size range d 90 - 250 mm**



- Economical, lightweight plastic fusion machine for mobile use. Suitable for plumbing installations, roof drainage systems and drainage pipes.
- **Base machine** for butt fusion from d 90 up to d 250 mm, max. d 250, SDR 33. Sliding carriages, pressure device 1000 N scale. Support for heating element.
- **Base clamping plates** right and left, d 250 mm
- **Reduction clamping inserts** d 90 - 225 mm
- **V-shaped pipe support** with inserts d 90 - 225 mm
- **Compact Planer** with reversible plates.
- **Heating element** thermostatic controlled, PTFE coated, electric cable with plug. Can also be used as a manual tool.
- **Steel frame** used for operation and transportation protection.

d-d [mm]	Performance	Code	kg	
90 - 250	230 V/2070 W	<b>790 311 020</b>	107.800	
90 - 250	115 V/2070 W	<b>790 311 021</b>	72.000	



## Weld 160 Accessories

### Reduction clamping inserts

- 1 Code Nr. includes 4 half-shells

d [mm]	Code	kg	
40	<b>790 113 031</b>	1.380	
50	<b>790 113 032</b>	1.395	
56	<b>790 113 033</b>	1.385	
63	<b>790 113 034</b>	1.360	
75	<b>790 113 035</b>	1.290	
90	<b>790 113 036</b>	1.235	
110	<b>790 113 037</b>	1.055	
125	<b>790 113 038</b>	0.885	
140	<b>790 113 039</b>	0.795	

### Set reduction clamping inserts

- Set reduction inserts dn 40 – 140 mm

d-d [mm]	Code	kg	
40 - 140	<b>790 301 006</b>	40.000	



### Inserts for pipe support

- 1 Code Nr. Includes 2 supports

d [mm]	Code	kg	
40	<b>790 113 041</b>	0.570	
50	<b>790 113 042</b>	0.545	
56	<b>790 113 043</b>	0.520	
63	<b>790 113 044</b>	0.520	
75	<b>790 113 045</b>	0.500	
90	<b>790 113 046</b>	0.460	
110	<b>790 113 047</b>	0.370	
125	<b>790 113 048</b>	0.340	
140	<b>790 113 049</b>	0.275	

### Set inserts for pipe support

- Set inserts dn 40 – 140 mm

d-d [mm]	Code	kg	
40 - 140	<b>790 113 050</b>	5.000	



### 1 Set planer blades

- (1 set = 2 blades)

Code	kg	
<b>790 113 056</b>	0.060	



## Weld 250 Accessories

### Reduction clamping inserts

- 1 Code Nr. includes 4 half-shells

d [mm]	Code	kg	
90	<b>790 311 050</b>	3.000	
110	<b>790 311 051</b>	2.750	
125	<b>790 311 052</b>	2.350	
140	<b>790 311 053</b>	2.200	
160	<b>790 311 054</b>	2.100	
180	<b>790 311 055</b>	1.800	
200	<b>790 311 056</b>	1.500	
225	<b>790 311 057</b>	1.000	

### Set reduction clamping inserts

- Set reduction inserts dn 90 – 225 mm

d-d [mm]	Code	
90 - 225	<b>790 311 071</b>	



### Inserts for pipe support

- 1 Code Nr. Includes 2 supports

d [mm]	Code	kg	
90	<b>790 311 060</b>	1.400	
110	<b>790 311 061</b>	1.350	
125	<b>790 311 062</b>	1.150	
140	<b>790 311 063</b>	1.100	
160	<b>790 311 064</b>	1.000	
180	<b>790 311 065</b>	0.900	
200	<b>790 311 066</b>	0.750	
225	<b>790 311 067</b>	0.500	

### Set inserts for pipe support

- Set inserts dn 90 – 225 mm

d-d [mm]	Code	kg	
90 - 225	<b>790 311 072</b>	1.400	



### 1 set planer blades

- (set of 2 blades)

Code	kg	
<b>790 115 024</b>	0.084	

# PSO 701 Butt fusion machine

**For fusion jointing of PP and PE pipes and fittings, size range d 40 - 160 mm**



- Professional butt fusion machine capable to weld pipes d 160mm up to SDR 11. The wooden box is usable as working bench as well as for transportation.
- Pressure adjustment via direct load transfer (max. force 100kp)
- Planer and heating element could be swivelled in and out
- High performance heating element thermostatic controlled (PTFE coated)
- The heating element can be used as manual fusion tool
- **V-shaped pipe support** with inserts d 40 - 140 mm
- **Reduction clamping inserts** d 40 - 140 mm
- **Base clamping plates** right and left, d 160 mm
- Machine specific tool set

d-d [mm]	Performance	Code	kg	
40 - 160	230 V/1360 W	<b>790 301 000</b>	95.500	



## PSO 701 Accessories Reduction clamping inserts

- 1 Code Nr. includes 4 half-shells

d [mm]	Code	kg	
40	<b>790 113 031</b>	1.380	
50	<b>790 113 032</b>	1.395	
56	<b>790 113 033</b>	1.385	
63	<b>790 113 034</b>	1.360	
75	<b>790 113 035</b>	1.290	
90	<b>790 113 036</b>	1.235	
110	<b>790 113 037</b>	1.055	
125	<b>790 113 038</b>	0.885	
140	<b>790 113 039</b>	0.795	

## Set reduction clamping inserts

- Set reduction inserts dn 40 – 140 mm

d-d [mm]	Code	kg	
40 - 140	<b>790 301 006</b>	40.000	



## Inserts for pipe support

- 1 Code Nr. Includes 2 supports

d [mm]	Code	kg	
40	<b>790 113 041</b>	0.570	
50	<b>790 113 042</b>	0.545	
56	<b>790 113 043</b>	0.520	
63	<b>790 113 044</b>	0.520	
75	<b>790 113 045</b>	0.500	
90	<b>790 113 046</b>	0.460	
110	<b>790 113 047</b>	0.370	
125	<b>790 113 048</b>	0.340	
140	<b>790 113 049</b>	0.275	

## Set inserts for pipe support

- Set inserts dn 40 – 140 mm

d-d [mm]	Code	kg	
40 - 140	<b>790 113 050</b>	5.000	



1 Set planer blades

- (1 set = 2 blades)

Code	kg	
790 113 056	0.060	



# SG 125 Socket fusion machine

## For fusion jointing of PP, PE, PB and PVDF pipes and fittings



- Portable heating element - socket fusion machine for use in the workshop and on job sites.
- Dimension 20 - 125 mm
- **Base machine**
- Compact, sturdy design, distortion-free machine bed
- Handwheel with torque locking mechanism for the slide movement
- Fast selection of insertion depth according to the pipe dimension
- **Heater**
- With electronic temperature control
- High temperature accuracy over the entire heating surface
- **Additional standard equipment on the basic model**
- Universal, left and right prismatic clamping devices, complete, for clamping pipe and fittings. Additional set of prismatic clamping devices for outer clamping of pipes available as an option.
- V-shaped pipe support d 20 - 125 mm
- Back stop
- Machine specific tool set
- Timer to clock fusion times
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
20 - 125	230 V/1500 W	<b>790 310 034</b>	65.000	
20 - 125	115 V/1500 W	<b>790 310 036</b>	65.000	

## SG 125 Accessories

### Heating spigots and bushes



- For socket fusion systems in PP, PE and PVDF
- Always delivered in pairs (also usable for SG 110, SG 125, not for SG 160)
- Type B according to DVS 2208-1 (mechanical calibrated pipe ends)

d [mm]	Code	kg	
20	<b>799 300 156</b>	0.115	
25	<b>799 300 157</b>	0.155	
32	<b>799 300 158</b>	0.225	
40	<b>799 300 159</b>	0.230	
50	<b>799 300 160</b>	0.335	
63	<b>799 300 161</b>	0.600	
75	<b>799 300 162</b>	0.965	
90	<b>799 300 163</b>	1.440	
110	<b>799 300 164</b>	2.210	
125	<b>799 300 165</b>	2.900	

### Set heating spigots and bushes Type B



- For socket fusion systems in PP, PE and PVDF
- Always delivered in pairs (also usable for SG 110, SG 125, not for SG 160)
- Type B according to DVS 2208-1 (mechanical calibrated pipe ends)

d-d [mm]	Code	
20 - 125	<b>790 310 023</b>	

### 1 set face chucks



d-d [mm]	Code	kg	
20 - 110	<b>790 310 018</b>	1.100	



## Universal prismatic clamping device, complete

d-d [mm]	Code	kg	
20 - 125	<b>790 310 040</b>	3.300	



## Backstop, complete

d-d [mm]	Code	kg	
20 - 110	<b>790 310 012</b>	0.600	



## V-shaped pipe support, complete

d-d [mm]	Code	kg	
20 - 125	<b>790 310 041</b>	0.700	



## Heating element

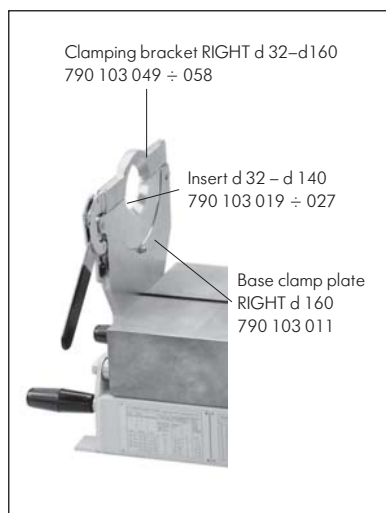
d-d [mm]	Performance	description	Code	kg	
20 - 125	230 V/1500 W	electronic	<b>790 310 043</b>	2.700	
20 - 125	230 V/1500 W	thermostatic	<b>790 310 044</b>	2.700	
20 - 125	115 V/1500 W	electronic	<b>790 310 045</b>	2.700	
20 - 125	115 V/1500 W	thermostatic	<b>790 310 046</b>	2.700	



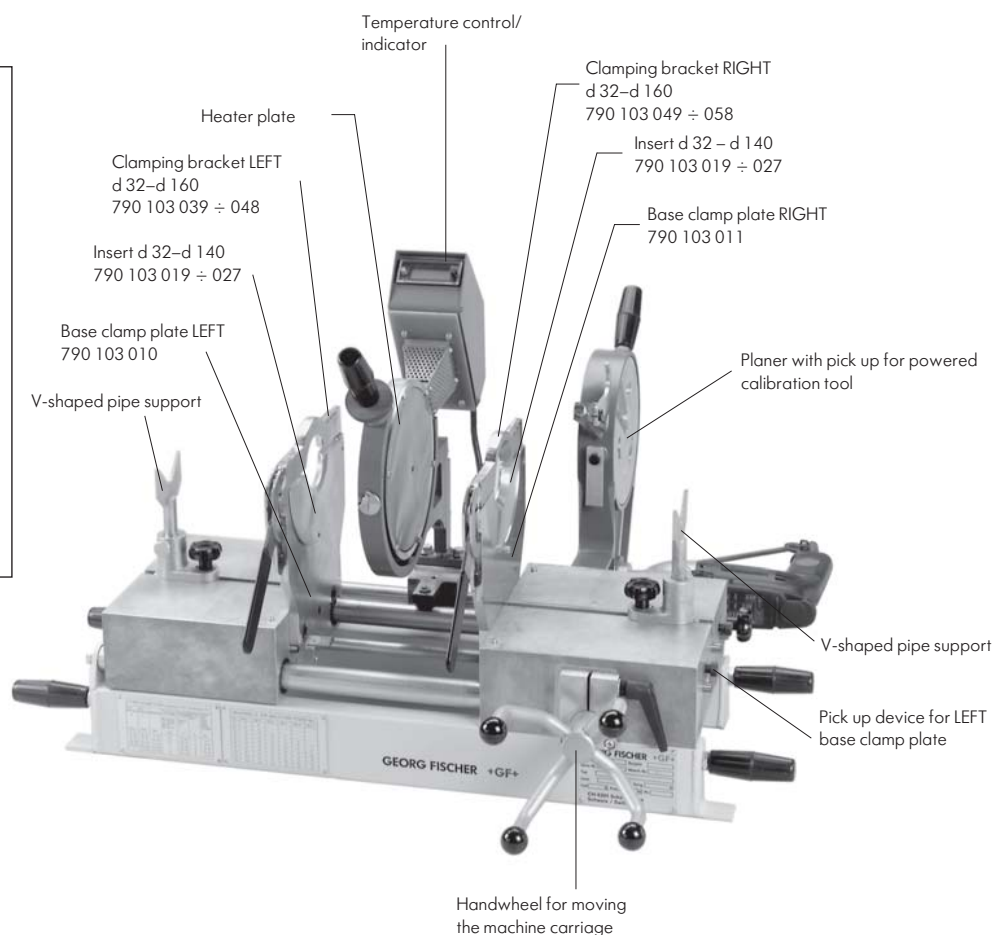
## Special transport crate

Code	kg	
<b>790 310 099</b>	26.000	

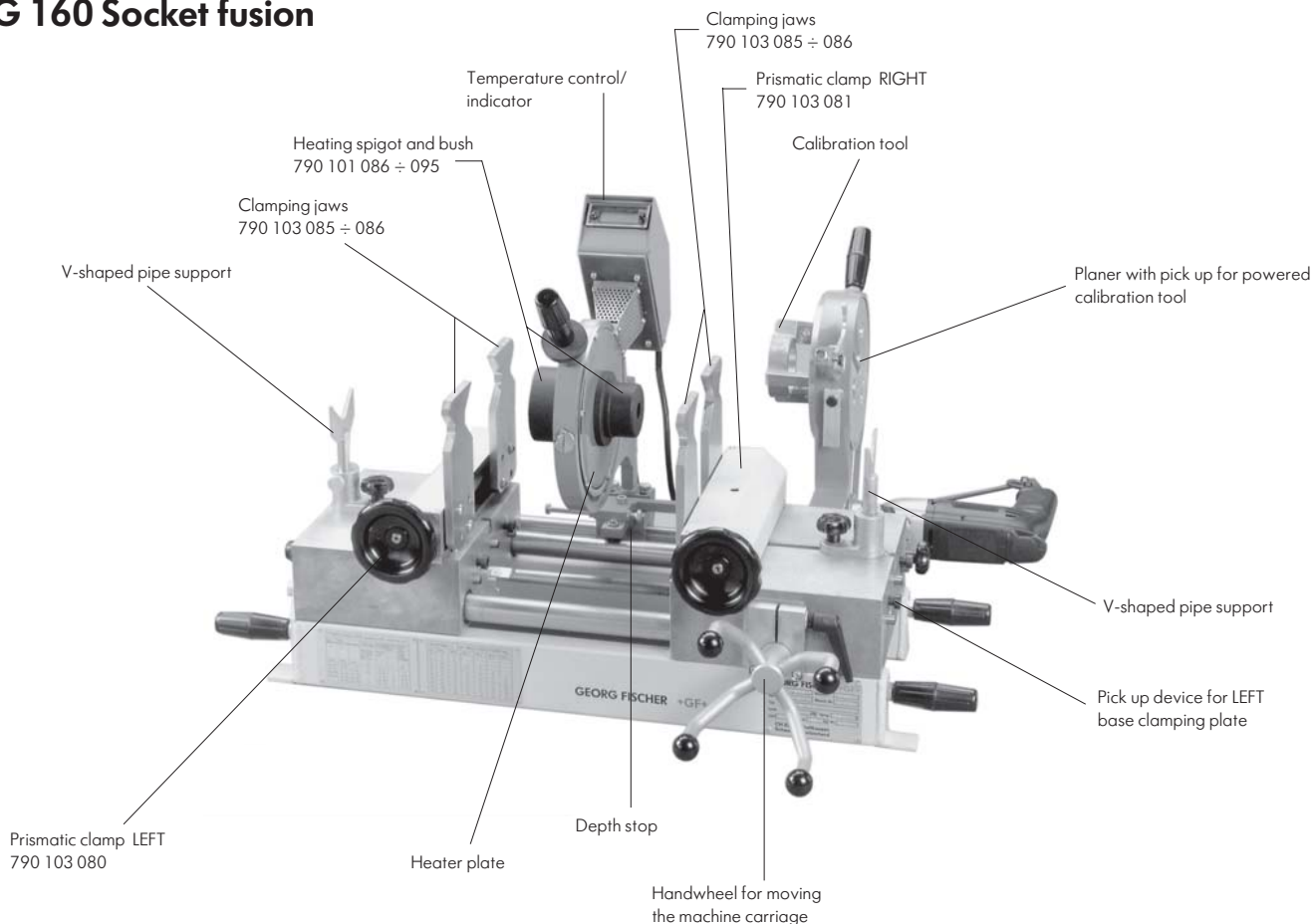
## SG 160 Butt fusion



Version with outer base clamp plate RIGHT (outer left side)



## SG 160 Socket fusion



# SG 160

## Combined butt and socket fusion machine

for fusion jointing PP, PE and PVDF pipes and fittings size range for butt fusion d 32 - 160



Mobile, very compact and universal plastic fusion machine for use in the workshop and on job sites.

Butt fusion d 32 - 160 mm, all pressure ratings up to PE/PP SDR 11; PVDF SDR 21.

Socket fusion d 16 - 110 mm

### Base machine

- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- All clamping possibilities for base clamping plates, pipe supports, back stop and prismatic clamping devices.

### Planer

- planing device made of light cast aluminium
- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends 620 W
- integrated pick up for easy mounting of calibration tools for machining of pipe ends in socket fusion

### Heater

- high-performance and precision heater with electronic temperature control 1500 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE fabric (Teflon)

### Additional standard equipment on the basic model

- V-shaped pipe supports d 16 - 160 mm for fittings
- timer to clock fusion times
- tool set specified to machine
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
16 - 160	230 V	790 103 031	44.900	
16 - 160	115 V	790 103 033	45.000	

# SG 160 Accessories for butt fusion

## Base clamping plates



- In order to improve the quality of the fusion joint, and for reliable clamping of long pipes, we recommend using the maximum number of clamping devices.
- For welding of long pipes we recommend to use the outer left and outer right base clamping plates as well.

- L = left
- R = right

d [mm]	Type	Code	kg	
160	L	790 103 010	2.503	
160	R	790 103 011	2.510	



## Inserts, left/right

- For base clamping plate or bracket
- Left or right

d [mm]	Code	kg	
32	790 103 019	0.315	
40	790 103 020	0.310	
50	790 103 021	0.302	
63	790 103 022	0.277	
75	790 103 023	0.250	
90	790 103 024	0.224	
110	790 103 025	0.178	
125	790 103 026	0.132	
140	790 103 027	0.079	



## Clamping bracket, left/right

- For base clamping plate or bracket
- L = left
- R = right

\* Threaded clamping bracket, for mounting inserts d 32 - 140 mm. An additional insert must be used instead of clamping brackets d 32 - 140 mm, i.e. twice the number of inserts listed must be ordered.

d [mm]	Type	Code	kg	
32	L	790 103 039	0.530	
40	L	790 103 040	0.530	
50	L	790 103 041	0.530	
63	L	790 103 042	0.530	
75	L	790 103 043	0.530	
90	L	790 103 044	0.580	
110	L	790 103 045	0.580	
125	L	790 103 046	0.606	
140	L	790 103 047	0.650	
* 160	L	790 103 048	0.669	
32	R	790 103 059	0.530	
40	R	790 103 060	0.530	
50	R	790 103 061	0.530	
63	R	790 103 062	0.530	
75	R	790 103 063	0.530	
90	R	790 103 064	0.580	
110	R	790 103 065	0.590	
125	R	790 103 066	0.605	
140	R	790 103 067	0.530	
* 160	R	790 103 068	0.650	

# SG 160 Accessories for socket fusion

## Prismatic clamping device



- Prismatic clamping device for pick up of clamping jaws for exact alignment of fusion components
- L = left
- R = right

\*Horizontal adjustable

Type	Code	kg	
L	<b>790 103 080</b>	6.112	
R	<b>790 103 081</b>	6.118	

## Clamping jaws



d	Code	kg	
16-32 / 90-110	<b>790 103 085</b>	0.310	
30-50 / 50-90	<b>790 103 086</b>	0.330	



## Depth stop, complete

Code	kg	
<b>790 103 090</b>	0.610	



## Heating spigots and bushes

d [mm]	Code	kg	
16	<b>790 101 086</b>	0.310	
20	<b>790 101 087</b>	0.315	
25	<b>790 101 088</b>	0.313	
32	<b>790 101 089</b>	0.316	
40	<b>790 101 090</b>	0.329	
50	<b>790 101 091</b>	0.475	
63	<b>790 101 092</b>	0.858	
75	<b>790 101 093</b>	1.157	
90	<b>790 101 094</b>	1.697	
110	<b>790 101 095</b>	2.090	

## Stiffener plate



d [mm]	Code	kg	
110	<b>790 101 098</b>	0.264	



## Calibration tool

- For mechanical, standardised calibration of pipe ends in PE, PP and PVDF (to be used with planer)
- easy and time-saving removal of oxide film
- Consistent peeling quality over the entire pipe circumference

d [mm]	Code	kg	
20	<b>790 103 160</b>	0.950	
25	<b>790 103 161</b>	0.950	
32	<b>790 103 162</b>	0.950	
40	<b>790 103 163</b>	0.930	
50	<b>790 103 164</b>	0.950	
63	<b>790 103 165</b>	1.000	
75	<b>790 103 166</b>	1.150	
90	<b>790 103 167</b>	1.250	
110	<b>790 103 168</b>	1.344	



## Back stop

- Prevents the components from slipping out of the clamping device during fusion.

d-d [mm]	Code	kg	
20 - 250	<b>790 101 045</b>	1.394	



## SG 160 Special accessories for butt and socket fusion Special transport crate

Code	kg	
<b>790 103 099</b>	108.000	



## SG 160 Wearing parts Set PTFE fabric sheets

- (set of 2 pieces)
- High-quality, easy to replace, non-stick PTFE fabric (Teflon) for the heater

d [mm]	Code	kg	
160	<b>790 103 306</b>	0.050	



## Set planer blades

Code	kg	
<b>790 103 548</b>	0.026	

# SG 315 Butt fusion machine

## for butt fusion jointing of PP, PE and PVDF pipes and fittings



The industrial butt fusion machine for pressure piping systems. Extremely sturdy design use in the workshop and on job sites.

Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11; PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Base machine

- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- optional outer, horizontally removeable clamping devices available

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	230 V	<b>790 130 001</b>	128.000	
90 - 315	115 V	<b>790 130 002</b>	128.000	



# SG 315-S Butt fusion machine

## for butt fusion jointing of PP, PE and PVDF pipes and fittings



The industrial butt fusion machine for pressure piping systems.

The S-version (S = segment) additionally allows prefabrication of segments.

Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11;

PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Base machine

- integrated swivel tables for equalization of wall offset transverse to axial direction, for segment fusion up to 30°
- optional outer, horizontally removeable clamping devices available
- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	230 V	<b>790 130 003</b>	150.000	
90 - 315	115 V	<b>790 130 004</b>	143.000	

# SG 315-D Butt fusion machine

## for butt fusion jointing of PP, PE and PVDF pipes and fittings



The industrial butt fusion machine for pressure piping systems. Extremely sturdy design use in the workshop and on job sites.

Equipped with a load cell and a digital display of the fusion force.

Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11;

PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Base machine

- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- digital display
- optional outer, horizontally removeable clamping devices available

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	230 V	<b>790 130 031</b>	150.000	
90 - 315	115 V	<b>790 130 032</b>	128.000	



# SG 315-SD Butt fusion machine

## for butt fusion jointing of PP, PE and PVDF pipes and fittings

The industrial butt fusion machine for pressure piping systems.

The S-version (S = segment) additionally allows prefabrication of segments.

Sizes d 90-315 mm, all pressure ratings up to max. PE d 280 SDR 11;

PP d 280 SDR 7.25 and PVDF d 315 SDR 21.

### Base machine

- integrated swivel tables for equalization of wall offset transverse to axial direction, for segment fusion up to 30°
- optional outer, horizontally removeable clamping devices available
- high precision, distortion-free and robust machine base
- handwheel for easy moving of machine carriage
- fusion pressure is maintained with a user friendly torque limiter
- exact pressure adjustment via direct load transfer
- hardened, hard-chrome plated guide shafts for extreme loads
- handle for safe transport of machine
- load cell
- digital display

### Planer

- optimised cutting geometry for even and chatter-free planing
- powerful parallel planer, swivels in and out for single or double-sided facing of pipe ends, 1100 W
- for your personal safety, a safety switch has been integrated to prevent unintentional start-up in the working position

### Heater

- high-performance and precision heater with electronic temperature control 1700 W
- high accuracy of +/- 4°C over the entire heating surface
- heater temperature can be set exactly with digital LCD
- high quality, non-stick, easy to change PTFE coating
- with digital temperature indicator

### Additional standard equipment included in the base model

- inner left and right clamping plates, d 315 mm, for pick up of reduction clamping inserts d 90 - 280 mm
- pipe supports d 315 mm for support of fittings
- timer to clock fusion times
- tool set specified to machine
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	230 V	<b>790 130 033</b>	143.000	
90 - 315	115 V	<b>790 130 034</b>	145.000	

# SG 315 / SG 315 - S Accessories

## Outer base clamping plates



d [mm]	Type	Code	kg	
315	L	<b>790 130 011</b>	6.203	
315	R	<b>790 130 012</b>	6.191	



## Reduction clamping inserts

d [mm]	narrow Code	wide Code	kg	
90	<b>790 112 098</b>	<b>790 112 088</b>	1.000	
110	<b>790 112 099</b>	<b>790 112 089</b>	0.960	
125	<b>790 112 100</b>	<b>790 112 090</b>	0.980	
140	<b>790 112 101</b>	<b>790 112 091</b>	0.950	
160	<b>790 112 102</b>	<b>790 112 092</b>	0.980	
180	<b>790 112 103</b>	<b>790 112 093</b>	0.900	
200	<b>790 112 104</b>	<b>790 112 094</b>	0.880	
225	<b>790 112 105</b>	<b>790 112 095</b>	0.940	
250	<b>790 112 106</b>	<b>790 112 096</b>	0.760	
280	<b>790 112 107</b>	<b>790 112 097</b>	0.750	



## Back stop

Code	kg	
<b>790 130 013</b>	2.750	



## Set planer blades

Code	kg	
<b>790 130 023</b>	0.043	



## Special transport crate

Code	kg	
<b>790 130 026</b>	143.000	

## Workshop butt fusion machines

- **WM 315** (90 mm - 315 mm)
- **WM 500** (250 mm - 500 mm)
- **WM 630** (315 mm - 630 mm)
- **WM 1200** (630 mm - 1200 mm)

Butt fusion machines for the jointing of PP, PE and PVDF pipes and fittings.

Accurate single or series prefabrication of segmented fittings like bends, Y, X and T- fittings for high pressure applications.

The sturdy clamping units are assembled with the reduction inserts according the specific machine range, both clamps are from 0° to maximum 22,5° turnable.

Automated machines with data recording and touch screen operation are available.



# WM 315 Workshop butt fusion machine

## Machine WM 315



- Machine for jointing segmented fittings like bends from d90 - 315 mm for high pressure applications
- To produce T and Y fittings from d90 - 250 mm, special accessories are required

### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely
- Each clamping tool can be turned a max. 22.5° and assembled with a set of reductions d90 - 280mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- Heating element pull-off mechanism
- Powerful planer (1200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Mechanical stops to provide single sided planing and accurate facing depth
- Planer is secured with a mechanical locking system and a micro switch
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	<b>790 118 060</b>	464.000	

## Machine WM 315 CNC



- Machine for jointing segmented fittings like bends from d90 - 315 mm for high pressure applications
- To produce T and Y fittings from d90 - 250 mm, special accessories are required
- Fully automated fusion process by the use of state of the art PLC and touch screen

### Machine description:

- Highest flexibility in the pipe preparation process
- The heating element is removed automatically during the change-over phase
- Data storage and transfer via USB to the PC
- Data management by SUVI WIN-WELD
- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned a max. 22.5° and assembled with a set of reductions d90 - 280mm
- Precision heating element with electronic temperature control (3000 W)
- High-quality PTFE coating with long service life
- Powerful planer (1200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Mechanical stops to provide single sided planing and accurate facing depth
- Planer is secured with a mechanical locking system and a micro switch
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
90 - 315	400 V/4620 W	<b>790 118 009</b>	465.000	

## WM 315 Accessories

### Flange adapter clamping unit



- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine
- Packaging included

d-d [mm]	Code	kg	
90 - 315	<b>790 118 031</b>	24.000	

### Base clamping unit left for fittings with adapter ring, wide



- For clamping fittings of d315 mm as well as for fastening reduction clamping inserts for fittings d90 to 280 mm. Guide shaft for pipe support und back stop, with pipe support d315 mm
- L = left
- R = right

d [mm]	Type	Code	kg	
315	L	<b>790 118 011</b>	15.000	
315	R	<b>790 118 012</b>	15.000	

### Reduction clamping inserts, narrow



- d 90 - 280 mm
- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg	
90	<b>790 112 098</b>	1.240	
110	<b>790 112 099</b>	1.210	
125	<b>790 112 100</b>	1.170	
140	<b>790 112 101</b>	1.130	
160	<b>790 112 102</b>	1.100	
180	<b>790 112 103</b>	1.000	
200	<b>790 112 104</b>	0.900	
225	<b>790 112 105</b>	0.800	
250	<b>790 112 106</b>	0.700	
280	<b>790 112 107</b>	0.550	

### Clamping insert, narrow, d 315



- For clamping of elbows, flange adapters, etc., d = 315 mm, 1 piece = 1 Alu-half-shell
- Each code number defines 1 piece reduction clamping insert. Per outer base clamping unit 2 reduction clamping inserts are needed.

d [mm]	Code	kg	
315	<b>790 118 028</b>	0.775	

### Set of pipe supports



d-d [mm]	Code	kg	
90 - 280	<b>790 118 025</b>	6.700	



## T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 90 to 250 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- **Complete** with reduction clamping inserts d 90 - 225 mm
- Packaging included

d-d [mm]	Code	kg	
90 - 250	<b>790 118 032</b>	140.000	



## Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings in the sizes d 90 to 250 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Reduction clamping inserts d 90 - 225 mm
- Packaging included

d-d [mm]	Code	kg	
90 - 250	<b>790 118 033</b>	175.000	



## Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	kg	
<b>790 118 026</b>	4.000	



## Set planer of blades

- Blade has 2 cutting edges (1 set = 2 pieces)

description	Code	kg	
long	<b>790 118 042</b>	0.220	
short	<b>790 118 043</b>	0.045	



# WM 500 Plus Workshop butt fusion machine

## Machine WM 500 Plus



- Machine for jointing segmented fittings like bends from d250 - 500 mm for high pressure applications
- To produce T and Y fittings from d250 - 400 mm, special accessories are required

### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), selection switch for single or double sided planing process, gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d250 - 450 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (10000 W)
- High-quality, PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
250 - 500	400 V/13600 W	<b>790 120 020</b>	1700.000	

# WM 500 Plus Accessories

## Flange adapter clamping unit



- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine
- Packaging included

d-d [mm]	Code	kg	
250 - 500	<b>790 120 031</b>	73.000	

## Base clamping unit 500 mm for fittings



- For clamping fittings of d500 mm as well as for the reduction clamping inserts for fittings of d250 to 450 mm. Guide shaft for pipe support and back stop, with pipe support d500 mm
- L = left
- R = right

d [mm]	Type	Code	kg	
500	L	<b>790 120 011</b>	104.000	
500	R	<b>790 120 012</b>	104.000	

## Reduction clamping inserts, narrow



- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg	
250	<b>790 116 018</b>	3.936	
280	<b>790 116 019</b>	3.891	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.395	

## Reduction clamping inserts, wide



- Each code number defines 1 piece of reduction clamping insert.

d [mm]	Code	kg	
250	<b>790 116 010</b>	3.569	
280	<b>790 116 011</b>	3.612	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.442	
450	<b>790 116 015</b>	3.308	

## Set of pipe supports



d-d [mm]	Code	kg	
250 - 450	<b>790 120 025</b>	10.700	

## Y-fitting clamping unit



- For the rational manufacturing of 30° to 45° Y-fittings in the sizes d 250 to 400 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Complete with reduction clamping inserts d 250 - 355 mm
- Packaging included

d-d [mm]	Code	kg	
250 - 400	<b>790 120 033</b>	610.000	



## T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 250 to 400 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Complete with reduction clamping inserts d 250 - 355 mm
- Packaging included

d-d [mm]	Code	kg	
250 - 400	<b>790 120 032</b>	415.000	



## Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	kg	
<b>790 108 026</b>	32.000	



## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 pieces)

Code	kg	
<b>790 117 041</b>	0.229	

# WM 630 Plus Workshop butt fusion machine

## Machine WM 630 Plus



- Machine for jointing segmented fittings like bends from d315 - 630 mm for high pressure applications
- To produce T and Y fittings from d315 - 500 mm, special accessories are required

### Machine description:

- Distortion-free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- Control panel assembled with pressure adjustment valve, pressure selection switch (planing or fusion pressure), selection switch for single or double sided planing process, gauge, joy stick and emergency stop
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/15600 W	790 108 020	2300.000	



## Machine WM 630 CNC

- Machine for jointing segmented fittings like bends from d315 - 630 mm for high pressure applications
- To produce T and Y fittings from d315 - 500 mm, special accessories are required

### Machine description:

- Fully automated fusion process by the use of state of the art PLC and touch screen
- Highest flexibility in the pipe preparation process
- Data storage and transfer via USB to the PC
- Data management by SUVI® WIN-WELD
- Distortion - free, sturdy machine frame
- Electric and hydraulic components separated in the frame
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d315 - 560 mm
- Hydraulically opening and closing of the upper clamping tools, manual locking with bolts and nuts
- Precision heating element with electronic temperature control (12000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- Powerful planer (1100 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/15600 W	<b>790 108 101</b>	2300.000	

# WM 630 Plus Accessories

## Flange adaptor clamping unit



- For centric fusion of flange adapters
- Easy, correct attachment of clamping unit in the basic machine
- Packaging included

d-d [mm]	Code	kg	
315 - 630	<b>790 108 031</b>	200.000	

## Base clamping unit for fittings



- For clamping fittings of d500 mm as well as for the reduction clamping inserts for fittings of d315 to 450 mm. Guide shaft for pipe support and back stop, with pipe support d500 mm
- L = left
- R = right

d [mm]	Type	Code	kg	
630	L	<b>790 108 017</b>	150.000	
630	R	<b>790 108 018</b>	150.000	

## Reduction clamping inserts, narrow



- Each code number defines 1 piece of reduction clamping insert.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 020</b>	3.622	
355	<b>790 116 021</b>	3.267	
400	<b>790 116 022</b>	2.508	
450	<b>790 116 023</b>	2.395	
500	<b>790 117 238</b>	3.700	
560	<b>790 117 239</b>	3.800	

## Reduction clamping inserts, wide



- Each code number defines 1 piece of reduction clamping insert.

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	Code	kg	
315	<b>790 116 012</b>	3.698	
355	<b>790 116 013</b>	3.727	
400	<b>790 116 014</b>	3.442	
450	<b>790 116 015</b>	3.308	
500	<b>790 117 012</b>	4.500	
560	<b>790 117 013</b>	4.900	

## Set of pipe supports



d-d [mm]	Code	kg	
315 - 450	<b>790 108 025</b>	6.000	
315 - 560	<b>790 108 009</b>	16.000	



## T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 315 to 500 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
315 - 500	<b>790 108 032</b>	600.000	



## Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings (branches) in the sizes d 315 - 500 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
315 - 500	<b>790 108 033</b>	770.000	



## Back stop

- Prevents the components from slipping out of the clamping device during fusion.

Code	kg	
<b>790 108 026</b>	32.000	



## 1 Set planer blades

- (1 set = 4 blades)

Code	kg	
<b>790 108 043</b>	0.500	

# WM 1200 Workshop butt fusion machine

## Machine WM 1200 with SUVI®50



- Machine for jointing segmented fittings like bends from d630 - 1200 mm for high pressure applications
- Professional data recording and operator guidance granted by the use of SUVI® 50
- To produce T and Y fittings from d630 - 900 mm, special accessories are required

### Machine description:

- Dimensions: 2400 L x 1400 W x 2070 H in mm
- Distortion-free, sturdy machine frame
- Hardened, hard chrome plated linear guide rails for extreme loads
- Electric and hydraulic components separated in the frame
- Moveable control panel assembled with potentiometer to adjust the fusion and the planing pressure, selection switch for single or double sided planing process, gauge, Open, Close and pressure release button, emergency stop
- The data recorder SUVI® 50 is a component of the control panel
- The main clamping tools are mounted on supports each of which can be adjusted transversely to the pipe axis
- Each clamping tool can be turned max. 22.5° and assembled with a set of reductions d630 - 1000 mm
- Hydraulically opening and closing of the upper clamping tools
- Hydraulic locking mechanism of the main clamping tools
- Precision heating element with electronic temperature control (30000 W)
- High-quality PTFE coating with long service life
- Insertion hydraulically operated
- High speed extraction to grant fast change over times
- Powerful planer (2200 W) with optimized cutting geometry for even and chatter-free planing
- Load transfer via robust chain drive
- Insertion hydraulically operated
- During the planing process each slide could be moved separately (single sided planing)
- Including transport packaging, without accessories

d-d [mm]	Performance	Code	kg	
630 - 1200	400 V/41000 W	790 126 001	8300.000	



## WM 1200 Accessories



### T-fitting clamping unit

- For the rational manufacturing of 90° T-fittings in the sizes d 630 - 900 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
630 - 900	<b>790 126 011</b>	2926.000	



### Y-fitting clamping unit

- For the rational manufacturing of 30° to 45° Y-fittings (branches) in the sizes d 630 - 900 mm
- Three-piece, precise clamping tool for easy mounting on the machine bed
- Integrated eyelets for lifting
- Complete with reduction clamping inserts
- Packaging included

d-d [mm]	Code	kg	
630 - 900	<b>790 126 012</b>	2910.000	

### X-fitting clamping unit

- To weld a X-piece the T-piece unit is necessary

d-d [mm]	Code	kg	
630 - 900	<b>790 126 013</b>	2900.000	

### Base Plate T-Y-X pieces

- To mount the T-Y-X pieces to the support plate

Code	kg	
<b>790 126 014</b>	1000.000	



### 1 Set planer blades

- 4 blades mounted on each planer disk
- (1 set = 4 blades)

Code	kg	
<b>790 126 043</b>	0.500	

## Construction Site Machines

**TM 160 - 315**

[40 mm - 315 mm]

**KL 500 - 630**

[200 mm - 630 mm]

**GF 400 - 1200**

[125 mm - 1200 mm]

Heating element butt fusion machines for pipes and fittings made of PE, PP, PB and PVDF for use on building sites.

Robust, reliable design for use in hard conditions, like gas and water distribution, water treatment or mining projects.

The machines could be equipped with the welding recorder WR 200, comfortable automatic CNC machines up to 630 mm are available. Additional to the machines displayed in this catalogue, different power supplies could be offered on request (e.g. 115 Volt, 230 Volt triple phase).

The presented accessories are providing proper solutions for the various demands on construction site.



# TM 160 - 250 - 315 ECO Butt fusion machines

## TM 160 - 250 - 315 ECO Machine complete



- Flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: lightweight ECO hydraulic unit, flexible base machine, powerful planer, high performance heating element with electronic temperature control box, storage case for the planer and heater
- Including transport packaging (carton pallet), without accessories and without reduction inserts
- 115 V on request!

Type	d-d [mm]	Performance	Code	kg	
TM 160 ECO	40 - 160	230V/1900W	<b>790 150 010</b>	86.000	
TM 250 ECO	75 - 250	230V/3270W	<b>790 151 010</b>	144.000	
TM 315 ECO	90 - 315	230V/3870W	<b>790 152 010</b>	157.000	

## TM 160 - 250 - 315 Base machine



- Tubular frame provides increased rigidity and easy movement of the machine on the ground
- 4 lifting lugs
- Metal shield provides protection of the main welding area
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Quick-action and drip-proof oil connections located in a protected position
- The base machine can be tilted to achieve a second operating position

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 001</b>	22.000	
TM 250	75 - 250	<b>790 151 001</b>	47.000	
TM 315	90 - 315	<b>790 152 001</b>	52.500	

## TM 160 - 250 - 315 ECO Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Reliable torque transmission via robust worm-gear device
- Ergonomic, weight-balanced handling
- Optimised cutting geometry for even and chatter-free planing
- Safety switch to prevent undesired start-up
- Self-locking mechanism in working position
- 115 V on request!

Type	d-d [mm]	Performance	Code	kg	
TM 160 ECO	40 - 160	230V/630W	<b>790 150 014</b>	7.000	
TM 250 ECO	75 - 250	230V/1200W	<b>790 151 014</b>	14.000	
TM 315 ECO	90 - 315	230V/1200W	<b>790 152 014</b>	17.000	



## TM 160 - 250 - 315 Heating element

- High performance, electronically controlled heating element
- Uniform temperature distribution over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Easy placement in the correct working position with automatic heater release mechanism
- 115 V on request!

Type	d-d [mm]	Performance	Code	kg	
TM 160	40 - 160	230V/1200W	<b>790 114 004</b>	5.200	
TM 250	75 - 250	230V/2000W	<b>790 115 004</b>	7.800	
TM 315	90 - 315	230V/2500W	<b>790 112 083</b>	9.800	



## TM 160 - 250 - 315 Case

- For safe storage of planer and heating element

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 295</b>	4.800	
TM 250	75 - 250	<b>790 151 027</b>	8.000	
TM 315	90 - 315	<b>790 152 027</b>	8.800	



## TM 160 - 250 - 315 ECO Hydraulic unit

- Clearly visible, vibration-free pressure gauge with precision scaling
- Compact construction with protection frame
- Fine adjustment of pressure
- High pressure consistency during cooling phase
- Fix attached hydraulic hose
- 115 V on request!

Type	Performance	Code	kg	
TM 160 ECO	230V/370W	<b>790 150 013</b>	21.500	
TM 250 - 315 ECO	230V/370W	<b>790 152 009</b>	22.000	



## TM 160 - 250 - 315 Temperature controller

- Electronic temperature control
- Accurate adjustment (set point) of heating element temperature
- Digital display of current and set-point temperature
- 115 V on request!

Type	Performance	Code	kg	
TM 160- 315 ECO	230V/3000W	<b>790 152 006</b>	2.000	

# TM 160 - 250 - 315 TOP Butt fusion machines

## TM 160 - 250 - 315 TOP Machine complete



- High quality, flexible and user-friendly heating element Butt Fusion machine for fusion joining PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: innovative TOP hydraulic unit, flexible base machine, powerful planer, high performance heating element, storage case for the planer and heater
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 TOP	40 - 160	230V/1900W	<b>790 150 011</b>	125.000	
TM 250 TOP	75 - 250	230V/3270W	<b>790 151 011</b>	204.000	
TM 315 TOP	90 - 315	230V/3870W	<b>790 152 026</b>	217.000	

## TM 160 - 250 - 315 Base machine



- Tubular frame provides increased rigidity and easy movement of the machine on the ground
- 4 lifting lugs
- Metal shield provides protection of the main welding area
- The movable (sliding) 3rd clamp allows easy and time-saving fixation of bends or tees without need of additional tools
- Double-sided heating element pull-off mechanism to optimise the change-over phase
- Clamps are hinged on the top side and tilting. Whenever necessary, the four clamps can be quickly removed
- Quick-action and drip-proof oil connections located in a protected position
- The base machine can be tilted to achieve a second operating position

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 001</b>	22.000	
TM 250	75 - 250	<b>790 151 001</b>	47.000	
TM 315	90 - 315	<b>790 152 001</b>	52.500	

## TM 160 - 250 - 315 TOP Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Reliable torque transmission via robust worm-gear device
- Optimised cutting geometry for even and chatter-free planing
- Ergonomic, weight-balanced handling
- Safety microswitch to prevent undesired start-up
- Self-locking mechanism in working position

Type	Performance	Code	kg	
TM 160 TOP	230V/630W	<b>790 150 000</b>	7.000	
TM 250 TOP	230V/1200W	<b>790 151 000</b>	14.000	
TM 315 TOP	230V/1200W	<b>790 152 000</b>	17.000	

## TM 160 - 250 - 315 Heating element



- High performance, electronically controlled heating element
- Uniform temperature distribution over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Temperature indicator integrated into the handle
- Easy placement in the correct working position with automatic heater release mechanism

Type	d-d [mm]	Performance	Code	kg	
TM 160	40 - 160	230V/1200W	<b>790 114 004</b>	5.200	
TM 250	75 - 250	230V/2000W	<b>790 115 004</b>	7.800	
TM 315	90 - 315	230V/2500W	<b>790 112 083</b>	9.800	



## TM 160 - 250 - 315 Case

- For safe storage of planer and heating element

Type	d-d [mm]	Code	kg	
TM 160	40 - 160	<b>790 150 295</b>	4.800	
TM 250	75 - 250	<b>790 151 027</b>	8.000	
TM 315	90 - 315	<b>790 152 027</b>	8.800	



## TM 160 - 250 - 315 TOP Hydraulic unit

- Shock-absorbing plastic housing in attractive design
- Internal aluminium frame providing high rigidity and resistance
- Intuitive control panel provided with digital indication of hydraulic pressure, electronic heating element temperature controller, 2-channel welding timer
- Precise pressure setting and fine adjusting
- Push-button operation of machine carriage
- Pressure release button for safe changeover from equalization to heat soak phase
- Integrated power outlets for planer, heating element
- Integrated additional power socket (230V-AC)
- Integrated interface for welding recorder
- Oil level control and refilling without disassembling the unit

Type	Performance	Code	kg	
TM 160 - 315 TOP	230V/370W	<b>790 151 004</b>	31.000	



## TM 160 - 250 - 315 TOP Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Type	Code	kg	
TM 160 - 315 TOP	<b>790 152 003</b>	4.000	



## TM 160 - 250 - 315 TOP Clamp tightening knobs

Type	Code	kg	
TM 160 TOP	<b>790 150 225</b>	1.000	
TM 250 - 315 TOP	<b>790 152 225</b>	1.500	

# TM 160 - 250 - 315 WR

## TM 160 - 250 - 315 WR Machine complete



- High quality, flexible and user-friendly heating element Butt Fusion machine for fusion jointing PE, PP, PB and PVDF pipes and fittings on building sites and in trenches
- Scope of delivery includes: innovative TOP hydraulic unit, flexible base machine, powerful planer, high performance heating element, storage case for the planer and heater
- Welding Recorder WR 200 configured to the machine and calibrated to the TOP hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

Type	d-d [mm]	Performance	Code	kg	
TM 160 WR	40 - 160	230V/1910W	<b>790 150 015</b>	136.000	
TM 160 WR CYRILLIC	40 - 160	230V/1910W	<b>790 150 016</b>	136.000	
TM 250 WR	75 - 250	230V/3280W	<b>790 151 015</b>	210.000	
TM 250 WR CYRILLIC	75 - 250	230V/3280W	<b>790 151 016</b>	210.000	
TM 315 WR	90 - 315	230V/3880W	<b>790 152 025</b>	224.000	
TM 315 WR CYRILLIC	90 - 315	230V/3880W	<b>790 152 016</b>	224.000	



## WR 200 Fusion welding recording device

The WR 200 assists the welder to ensure the quality of the butt-fusion jointing according to country specific standards. The user is guided through all preparation and fusion steps. The selection of the fusion data like the used material, welding standard, diameter and wall thickness (SDR) is supported by a menu. The complete fusion sequence is supervised and recorded for later print out or transfer to a data base. The recorder with its on-board printer is protected by a hard plastic case of IP 65 protection class. The power and connecting cables are stored in a separate box.

The WR 200 can be connected to hydraulically operated butt-fusion machines, even by later retrofitting of machines in service centres .

### Performance:

- Intuitive user guidance menu
- Welding standard selection e.g. DVS, UNI, WIS, ISO
- Welding process customisable: 4 user defined cycle available
- Additional input of joint number, user identity, job site, order number and GPS coordinates
- Internal memory capacity of up to 250 protocols
- Selection of operator language
- Battery support for an autonomy of 10 hours (no data loss during power interruption)
- Rental and revision period adjustable (CD content of delivery)
- Easy configuration by the end user to the connected GF/KL/TM machine
- Same electrical connections as SUVI® 50 and WR 100 – interchangeable
- Working range: -10°C to +50°C

### Data Management:

- Internal memory of 250 protocols
- Print out of protocols directly from on-board printer
- Transfer of protocols to USB memory stick
- Protocols in CSV, TXT and SUVI® WIN-WELD compatible formats

Type	Performance	Dimensions [mm]	Code	kg	
WR 200	230 V	350x300x250 mm	<b>790 119 401</b>	5.000	
WR 200 CYRILLIC	230 V	350x300x250 mm	<b>790 119 425</b>	5.500	

# TM 160 - 250- 315 CNC

## Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit and the machine components of the TM TOP machines: sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories !

## CNC Control Unit



- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions (Relining), special materials etc.).
- Various configuration possibilities, such as cooling time reduction according to the measured ambient temperature (CTC) and automatic bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine).
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Shock absorbing plastic housing in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Accessory).
- Oil level control and refilling without disassembling the unit.
- Two handles to carry the hydraulic unit.

Type	d-d [mm]	Performance	Code	kg	
TM 160 CNC	40 - 160	230V/2000W	<b>790 150 012</b>	125.000	
TM 250 CNC	75 - 250	230V/3150W	<b>790 151 012</b>	195.000	
TM 315 CNC	90 - 315	230V/3750W	<b>790 152 012</b>	215.000	



# TM 250 –315 CNC Machine with automatic heating element

## Machine complete



- High quality, reliable and user-friendly heating element butt fusion machine for automated fusion jointing of PE and PP pipes and fittings on building sites.
- Designed for applications in gas and water distribution.
- Machine equipped with innovative CNC hydraulic control unit, sturdy base machine, powerful planer, high performance heating element, storage case for the planer and heater.
- The heating element is ejected automatically from the working position during change-over phase.
- Quick change of the heating element position from the central to the outer welding position when welding e.g. a T-Piece to a pipe.
- The distance control (potentiometer) mounted into the base machine grants control and safety throughout the complete welding process.
- Scope of delivery includes transport packaging (wooden crate), not the reduction inserts and other accessories !

## CNC Control Unit



- Operator guidance from preparation to the end of the jointing process by use of symbols and graphics.
- Intuitive data input by touch screen operation (welding standard, material, diameter, SDR, traceability data).
- Automatic calculation, regulation and control of the fusion parameters - pressure, time and temperature - according to country specific guidelines.
- 10 freely programmable welding cycles available (e.g. for non standard dimensions (Relining), special materials etc.).
- Various configuration possibilities such as cooling time reduction according to the measured ambient temperature (CTC) and automatic bead build-up phase.
- Selection of language.
- Welding report storage on removable standard USB memory key (memory key supplied with the machine).
- Data transfer to PC (SUVI WIN-WELD software supplied with the machine) via USB interface.
- Shock absorbing plastic housing in attractive design.
- Integrated power outlets for planer and heating element.
- Preinstalled socket for connection of the barcode scanner (Accessory).
- Oil level control and refilling without disassembling the unit.
- Two handles to carry the hydraulic unit.

Type	d-d [mm]	Performance	Code	kg	
TM 250 CNC	75 - 250	230V/3150W	<b>790 151 071</b>	195.000	
TM 315 CNC	90 - 315	230V/3750W	<b>790 152 071</b>	230.000	

# TM 160 - 250 - 315 Accessories

## TM 160 Reduction clamping inserts



- d 40 - 140 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

d [mm]	narrow Code	wide Code	kg	
40	790 114 027	790 114 023	0.298	
50	790 114 016	790 114 009	0.326	
63	790 114 017	790 114 010	0.305	
75	790 114 018	790 114 011	0.290	
90	790 114 019	790 114 012	0.277	
110	790 114 020	790 114 013	0.260	
125	790 114 021	790 114 014	0.270	
140	790 114 022	790 114 015	0.183	



## TM 250 Reduction clamping inserts

- d 75 - 225 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

d [mm]	narrow Code	wide Code	kg	
75	790 115 029	790 115 028	0.902	
90	790 115 016	790 115 008	0.887	
110	790 115 017	790 115 009	0.926	
125	790 115 018	790 115 010	0.840	
140	790 115 019	790 115 011	0.796	
160	790 115 020	790 115 012	0.748	
180	790 115 021	790 115 013	0.687	
200	790 115 022	790 115 014	0.733	
225	790 115 023	790 115 015	0.455	



## TM 315 Reduction clamping inserts

- d 90 - 280 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

d [mm]	narrow Code	wide Code	kg	
90	790 112 098	790 112 088	1.000	
110	790 112 099	790 112 089	0.960	
125	790 112 100	790 112 090	0.980	
140	790 112 101	790 112 091	0.950	
160	790 112 102	790 112 092	0.980	
180	790 112 103	790 112 093	0.900	
200	790 112 104	790 112 094	0.880	
225	790 112 105	790 112 095	0.940	
250	790 112 106	790 112 096	0.760	
280	790 112 107	790 112 097	0.750	



## TM 160 - 250 - 315 Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension
- Reductions in inch sizes or special diameters upon request

d-d [mm]	Code	kg	
40 - 140	<b>790 114 156</b>	17.000	
75 - 225	<b>790 115 156</b>	48.000	
90 - 280	<b>790 112 156</b>	78.000	



## TM 160 - 250 - 315 Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the machine dimension: e.g. bend Ø250 mm with a TM 250
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position

Type	Left Code	Right Code	kg	
TM 160	<b>790 150 205</b>	<b>790 150 206</b>	0.800	
TM 250	<b>790 151 205</b>	<b>790 151 206</b>	1.400	
TM 315	<b>790 152 205</b>	<b>790 152 206</b>	2.681	



## TM 160 - 250 - 315 Flange adapter clamping units

- For correct clamping and fusion jointing of short-ended stub ends

d-d [mm]	Code	kg	
40 - 160	<b>790 319 007</b>	5.800	
75 - 250	<b>790 115 044</b>	8.000	
90 - 315	<b>790 112 073</b>	11.000	



## TM 160 - 250 - 315 TOP Clamp tightening knobs

Type	Code	kg	
TM 160 TOP	<b>790 150 225</b>	1.000	
TM 250 - 315 TOP	<b>790 152 225</b>	1.500	



## TM 160 - 250 - 315 Hydraulic adapter hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action
- Required when assembling a TM base machine to GF or KL hydraulic units
- Required when connecting a GF or KL base machine to the TM TOP hydraulic unit
- Hoses with quick action couplers (M3/8" – F 1/4" , F 3/8" – M 1/4")

Code	kg	
<b>790 150 003</b>	4.000	



## TM 160 - 250 - 315 Set planer blades

- (1 set = 2 blades)

d-d [mm]	Code	kg	
40 - 160	<b>790 113 056</b>	0.060	
75 - 250	<b>790 115 024</b>	0.084	
90 - 315	<b>790 112 110</b>	0.116	



## TM 160 - 250 - 315 Pipe lifter

- Convenient movement of the welded pipes through the base machine
- Lifting the pipes out of the clamps or inserts, to let the bead pass without blocking
- Supporting the welded pipes on height adjustable rollers
- The pipe lifter could be easily assembled to the base machine
- The delivery contains one left and one right pipe lifter and one lever

Type	Code	kg	
TM 160	<b>790 150 050</b>	9.000	
TM 250	<b>790 151 050</b>	11.000	
TM 315	<b>790 152 050</b>	12.500	



## TM 250 - 315 Pressure Shut-Off Valve

- Time saving in the butt fusion process, by working with 2 base machines
- Enabling to disconnect the base machine under pressure from the hydraulic unit during the cooling time
- Close the pressure valve, release pressure at the hydraulic unit, disconnect the hoses from the base machine. Keep the joint cooling down
- Use the cooling time for pipe preparation and welding of the next joint by connecting the hydraulic unit hoses to a second base machine

Type	Code	kg	
TM 250 - 315	<b>790 151 002</b>	1.500	



## TM 160 - 250 - 315 RU Repair unit

- Repair unit with 2 clamping devices and a pair of cylinders, especially convenient for butt-fusion joints in narrow trenches or inside of buildings and industrial plants.
- Heating element, planer, hydraulic unit and reduction inserts could be used from the corresponding TM machine.

Type	Code	kg	
RU 160	<b>790 150 045</b>	8.800	
RU 250	<b>790 151 045</b>	18.000	
RU 315	<b>790 152 045</b>	20.000	



## TM 160 - 250 - 315 RU Outer Clamp

- An additional clamping device can be mounted on the cylinders to improve the alignment of the components to be welded.

Type	Code	kg	
RU 160	<b>790 150 046</b>	2.000	
RU 250	<b>790 151 046</b>	4.400	
RU 315	<b>790 152 046</b>	5.400	



## FL 250 - 315 Base Machine

- Consisting of robust welded frame, 3 horizontally mounted clamping devices and two hydraulic cylinders with quick-action couplers to connect the flexible hoses
- Clamps are hinged and tilting, whenever necessary the clamps can be quickly removed
- The machine-core, formed by the 3 clamps and the cylinders can also be easily removed from the frame, allowing to use the machine for repair works or in narrow trenches
- Heating element, planer, hydraulic unit and reduction inserts could be used from the corresponding TM machine



Description	Code	kg	
FL 250	<b>790 151 051</b>	34.500	
FL 315	<b>790 152 051</b>	39.500	



## FL 250 – 315 Outer Clamp

- The FL 250 – 315 base machine can be fitted with an additionally outer clamping device
- Improves the alignment of the components to be welded



Description	Code	kg	
FL 250	<b>790 151 303</b>	13.000	
FL 315	<b>790 152 303</b>	14.000	



## Software PIPE WIN WELD / SUVI WIN WELD

- Professional software for analysis and documentation of installed piping systems or of a defined part of it: i. e. Pipe book. With PIPE WIN WELD it is possible to create a complete electronic documentation of the installed pipes and pipe connection elements. The software works with the data bases of MSA WIN WELD and SUVI WIN WELD. The software makes it possible to work with data from other manufacturers (CSV module for data transfer).
- The software is suitable for use with Windows ME/NT4/2000/XP/Vista.
- Scope of delivery: CD-ROM, USB hardlock (PIPE WIN-WELD, PIPE WIN-WELD CSV), installation guide (manuals and additional information on CD-ROM)

Type	Code	kg	Description	
PIPE CSV	<b>790 119 301</b>	0.180	Complete package incl. CSV module for data transfer, USB hardlock	
PIPE	<b>790 119 302</b>	0.180	Complete package, USB hardlock	
SUVI	<b>790 119 303</b>	0.180	Complete package	

# GF 400 Butt fusion machine

## Machine GF 400 complete, 400 V



- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to SDR 11.
- Assembled with control box to supply all components with power, only 1 power connection required !
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
125 - 400	400 V/5700 W	<b>790 127 010</b>	210.000	



## Base machine

- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism to optimize the changeover phase
- For the purpose of welding bends and T-pieces the 2. clamping element is fast and relocatable without losing stability on the guiding shafts
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
125 - 400	<b>790 127 002</b>	95.000	



## Planer

- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
125 - 400	230 V/1100 W	<b>790 127 003</b>	47.500	



## Heating element

- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
125 - 400	230 V/3500 W	<b>790 127 004</b>	15.800	



## Hydraulic unit

- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 127 006</b>	40.000	



## Control box

- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Performance	Code	kg	
400 V	<b>790 127 008</b>	15.500	



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 112 085</b>	4.000	



## Case

- For safe storage of planer and heating element

Code	kg	
<b>790 127 005</b>	30.000	



## Machine GF 400 complete, 230 V

- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to SDR 11.
- Machine complete with remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
125 - 400	230 V/5700 W	<b>790 127 001</b>	0.001	

# GF 400 Accessories



## Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 125/d 140/d 160/d 180/d 200/d 225/d 250/d 280, the reduction clamping insert d 315 mm, code 790 127 101, must also be used

d [mm]	narrow Code	wide Code	kg
125	790 112 100	790 112 090	0.980
140	790 112 101	790 112 091	0.950
160	790 112 102	790 112 092	0.980
180	790 112 103	790 112 093	0.900
200	790 112 104	790 112 094	0.880
225	790 112 105	790 112 095	0.940
250	790 112 106	790 112 096	0.760
280	790 112 107	790 112 097	0.750
315	790 127 111	790 127 101	3.540
355	790 127 112	790 127 102	3.540



## Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension
- 8 wide clamping inserts d 315 mm
- Reductions in inch sizes or special diameters upon request

d-d [mm]	Code	kg
125 - 355	790 127 156	30.000

## Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension
- Right: bend is clamped right from the heating element position

Description	Code	kg
Right	790 127 106	0.001



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg
400	790 127 045	24.600



## Hoist unit

- For carrying planer and heating element.
- The weight compensator is mounted at the backside of the base machine.
- Weight compensator included

Code	kg
790 127 026	28.000



## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg
790 112 110	0.116



# GF 500 Butt fusion machine

## Machine GF 500 complete



- High quality, long-lasting heating element butt fusion machine for fusion jointing PP and PE pipes and fittings. Size range d 200-500 mm, for complete pressure range up to PN 16.
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/6250 W	<b>790 116 040</b>	498.000	

## Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 35° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism to optimize the changeover phase
- For the purpose of welding bends and T-pieces the 2. clamping element is fast and relocatable without losing stability on the guiding shafts
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
200 - 500	<b>790 116 002</b>	169.000	

## Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/750 W	<b>790 116 003</b>	58.000	

## Heating element



- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/4000 W	<b>790 116 004</b>	25.900	

## Hydraulic unit



- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 116 039</b>	41.000	



## Control box

- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Voltage	Code	kg	
400 V	790 116 038	15.500	



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
790 112 085	4.000	



## Case

- For safe storage of planer and heating element

Code	kg	
790 116 006	38.000	

# GF 500 Accessories

## Reduction clamping inserts



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	narrow Code	wide Code	kg
200	790 116 016	790 116 008	4.217
225	790 116 017	790 116 009	4.172
250	790 116 018	790 116 010	3.569
280	790 116 019	790 116 011	3.612
315	790 116 020	790 116 012	3.698
355	790 116 021	790 116 013	3.727
400	790 116 022	790 116 014	3.442
450	790 116 023	790 116 015	3.308



## Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts of each dimension
- Reductions in inch sizes or special diameters upon request

d-d [mm]	Code	kg
250 - 450	790 116 156	162.000

## Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension
- Left: bend is clamped left from the heating element position
- Right: bend is clamped right from the heating element position

description	Code	kg
Right	790 116 268	0.001
Left	790 116 269	0.001



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg
500	790 116 045	22.000



## Hoist unit frame

- Hoist unit (consists of frame and swivel arm)
- Mounted to the base machine

Code	kg
790 116 026	22.000



## Weight compensator to hoist unit

- For heating element, planer weight is partially compensated
- For hoist unit 790 116 026

Code	kg	
790 116 027	12.500	



## 1 Set planer blades

description	Code	kg	
Blade has 2 cutting edges (1 set = 2 blades)	790 116 041	0.700	

# KL 500 Butt fusion machine

## KL 500 TOP2 Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Machine provided with Hydromat hydraulic unit and remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/6250 W	<b>790 140 010</b>	312.000	

## Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg	
200 - 500	<b>790 340 001</b>	157.000	

## Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/750 W	<b>790 340 002</b>	55.000	

## Heating element



- High performance, electronically controlled heating element
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/4000 W	<b>790 116 004</b>	25.900	

## Remote control



- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg	
<b>790 340 003</b>	3.800	

## Hydraulic hose package



- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 112 085</b>	4.000	



## Case

- For safe storage of planer and heating element

Code	kg	
790 116 006	38.000	



## Hydromat

- Clearly visible, vibration-free pressure gauge with precision scaling
- Fine adjustment of pressure
- High pressure consistency during cooling phase

Performance	Code	kg	
230 V/1500 W	790 340 005	31.000	



## KL 500 TOP1 Machine complete

- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Control box containing electronic temperature control and power distribution for heating element and planer
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
200 - 500	400 V/6250 W	790 340 000	470.561	

# KL 500 Accessories

## Reduction clamping inserts



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 200/d 225, the reduction clamping insert 790 116 015 must also be used

d [mm]	narrow Code	wide Code	kg
200	790 116 016	790 116 008	4.217
225	790 116 017	790 116 009	4.172
250	790 116 018	790 116 010	3.569
280	790 116 019	790 116 011	3.612
315	790 116 020	790 116 012	3.698
355	790 116 021	790 116 013	3.727
400	790 116 022	790 116 014	3.442
450	790 116 023	790 116 015	3.308

## Reduction clamping inserts-set



- 4 wide and 4 narrow clamping inserts of each dimension

d-d [mm]	Code	kg
250 - 450	790 116 156	162.000

## Chamfered upper clamp



- Necessary for welding short-leg bends dn 500 mm

Code	kg
790 340 261	8.000

## Flange adapter clamping unit



- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg
500	790 116 045	22.000

## Hoist unit



- Hoist unit (consists of frame and swivel arm)

Description	Code	kg
Electrical motor 230 V / 500 W	790 140 026	22.000

## Control box



- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Voltage	Code	kg
400 V	790 116 038	15.500



# 1 Set planer blades

description	Code	kg	
Blade has 2 cutting edges (1 set = 2 blades)	790 116 041	0.700	



# GF 630 Butt fusion machine

## Machine GF 630 complete



- High quality, long-lasting heating element butt fusion machine for fusion jointing PP, PE pipes and fittings. Size range d 315-630 mm, for complete pressure range up to PN 16.
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/11000 W	<b>790 117 001</b>	617.000	

## Base machine



- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Heater release mechanism
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg		
315 - 630	<b>790 117 002</b>	222.000		

## Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/1500 W	<b>790 117 003</b>	99.000	

## Heating element



- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/8000 W	<b>790 117 004</b>	39.000	

## Hydraulic unit



- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Code	kg	
<b>790 116 039</b>	41.000	



### Control box

- 400 V
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Code	kg	
790 117 038	27.600	



### Case

- For safe storage of planer and heating element

Code	kg	
790 117 006	55.000	



### Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
790 112 085	4.000	

## GF 630 Accessories

### Reduction clamping inserts



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	narrow Code	wide Code	kg
315	790 116 020	790 116 012	3.698
355	790 116 021	790 116 013	3.727
400	790 116 022	790 116 014	3.442
450	790 116 023	790 116 015	3.308
500	790 117 238	790 117 012	4.500
560	790 117 239	790 117 013	4.900



### Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts d 315, d 355, d 400, d 450
- 8 wide reduction inserts d 500, d 560

d-d [mm]	Code	kg
315 - 560	790 117 021	201.000



### Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension

Code	kg
790 345 233	4.000



### Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg
630	790 117 029	29.000



### Hoist unit, complete

- Hoist unit (consists of frame and swivel arm)
- Arm length 2m, pivoting, back/forward, max. column height from floor 3.30m
- Electrical unit 400 V / 600 W
- Hoist capacity 250 kg
- 2 hoisting speeds (1,7 m/min. and 7.0 m/min.)

Code	kg
790 117 023	196.000



### 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg
790 117 041	0.229

# KL 630 Butt fusion machine

## KL 630 TOP2 Machine complete



- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Machine provided with Hydromat hydraulic unit and remote control
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/11000 W	<b>790 345 012</b>	627.000	

## Base machine



- Double clamping device for secure hold and exact radial and axial alignment of components
- Good accessibility thanks to 45° inclination
- drip-proof quick action coupling for the connection of the hydraulic hoses

d-d [mm]	Code	kg	
315 - 630	<b>790 117 002</b>	222.000	

## Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free, robust chain
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/1500 W	<b>790 117 003</b>	99.000	

## Heating element



- High performance, electronically controlled heating element
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/8000 W	<b>790 117 004</b>	39.000	

## Remote control



- Electronic temperature control
- Accurate adjustment of heating element temperature

Code	kg	
<b>790 340 003</b>	3.800	

## Case



- For safe storage of planer and heating element

Code	kg	
<b>790 117 006</b>	55.000	



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
790 112 085	4.000	



## Hydromat

- Clearly visible, vibration-free pressure gauge with precision scaling
- Fine adjustment of pressure
- High pressure consistency during cooling phase

Performance	Code	kg	
230 V/1500 W	790 340 005	31.000	



## KL 630 TOP1 Machine complete

- Compact and robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. For complete pressure range up to PN 16.
- Control box containing electronic temperature control and power distribution for heating element and planer
- Machine provided with Hydromat hydraulic unit
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
315 - 630	400 V/11000 W	790 345 000	627.000	

# KL 630 Accessories



## Reduction clamping inserts

- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- We recommend 4 wide and 4 narrow half shells.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 315/d 355/d 400/d 450 to the base clamp d 630, the reduction clamping insert d 500 mm, code 790 117 012, must also be used

d [mm]	narrow Code	wide Code	kg
315	<b>790 116 020</b>	<b>790 116 012</b>	3.698
355	<b>790 116 021</b>	<b>790 116 013</b>	3.727
400	<b>790 116 022</b>	<b>790 116 014</b>	3.442
450	<b>790 116 023</b>	<b>790 116 015</b>	3.308
500	<b>790 117 238</b>	<b>790 117 012</b>	4.500
560	<b>790 117 239</b>	<b>790 117 013</b>	4.900



## Reduction clamping inserts-set

- 4 wide and 4 narrow clamping inserts d 315, d 355, d 400, d 450
- 8 wide reduction inserts d 500, d 560

d-d [mm]	Code	kg
315 - 560	<b>790 117 021</b>	201.000



## Chamfered upper clamp

- Necessary for welding short-leg bends having diameters equal of the maximum machine dimension

Code	kg
<b>790 345 233</b>	4.000



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d [mm]	Code	kg
630	<b>790 117 029</b>	29.000



## Control box

- 400 V
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Code	kg
<b>790 117 038</b>	27.600



## Hoist unit, complete

- Hoist unit (consists of frame and swivel arm)
- Arm length 2m, pivoting, back/forward, max. column height from floor 3.30m
- Electrical unit 400 V / 600 W
- Hoist capacity 250 kg
- 2 hoisting speeds (1,7 m/min. and 7.0 m/min.)

Code	kg
<b>790 117 023</b>	196.000



## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg	
790 117 041	0.229	

# GF 800 Butt fusion machine

## Machine GF 800 complete



- Robust heating element-butt fusion machine for fusion jointing PP and PE pipes and fittings. Size range d 500-800 mm.
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes. Example: PE 100 , SDR 11, dn 800 mm requires a fusion pressure of 106 bar according to DVS 2207 – 1 (0,15 MPa)
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790123016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
500 - 800	400 V/15000 W	<b>790 123 025</b>	1546.000	



## Base machine

- Heater release mechanism
- High precision design, distortion-free and sturdy machine frame
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
500 - 800	<b>790 123 023</b>	690.000	



## Planer

- Powerful parallel planer for single or double-sided facing of pipe ends 400 V/1500 W
- Load transfer via maintenance-free chain drive
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
500 - 800	400 V/1500 W	<b>790 123 003</b>	185.000	



## Heating element

- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life
- Easy placement in the correct working position with heater release mechanism

d-d [mm]	Performance	Code	kg	
500 - 800	400 V/12000 W	<b>790 123 004</b>	56.000	





## Hydraulic unit

- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	41.000	



## Control box

- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Performance	Code	kg	
400 V	<b>790 123 009</b>	29.000	



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 123 020</b>	6.000	



## Case

- For safe storage of planer and heating element

Code	kg	
<b>790 123 007</b>	226.000	

# GF 800 Accessories

## Reduction clamping inserts



- d 500 - 710 mm
- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 500/d 560, the reduction clamping insert d 630, code 790 123 011 must also be used

d [mm]	narrow Code	wide Code	kg
500	<b>790 117 238</b>	<b>790 117 012</b>	4.500
560	<b>790 117 239</b>	<b>790 117 013</b>	4.900
630	<b>790 123 219</b>	<b>790 123 011</b>	11.000
710	<b>790 123 220</b>	<b>790 123 012</b>	12.500

## Reduction clamping inserts-set

- 8 wide clamping inserts dn 500, 560, 630, 710 mm

Code	kg
<b>790 350 019</b>	0.001



## Electric Hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg
<b>790 123 016</b>	270.000



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

d-d [mm]	Code	kg
500 - 800	<b>790 123 029</b>	120.000



## 1 Set planer blades

- Blade has 2 cutting edges (1 set = 2 blades)

Code	kg
<b>790 117 041</b>	0.229

# GF 1000 Butt fusion machine

## Machine GF 1000 complete



- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- Size range dn 710 – 1000 mm
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes.  
Example: PE 100 ,SDR 11, dn 1000 mm requires a fusion pressure of 130 bar according to DVS 2207 – 1 (0,15 MPa)
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790124016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/19500 W	<b>790 124 025</b>	2528.000	



## Base machine

- High precision design, distortion-free and sturdy machine frame
- Heater release mechanism
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Machine specific tool set

d-d [mm]	Code	kg	
710 - 1000	<b>790 124 023</b>	1240.000	



## Planer

- Powerful parallel planer for single or double-sided facing of pipe ends
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/3000 W	<b>790 124 003</b>	308.000	



## Heating element

- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface
- High-quality, non-stick PTFE-coating with long service life

d-d [mm]	Performance	Code	kg	
710 - 1000	400 V/15000 W	<b>790 124 004</b>	88.000	



## Hydraulic unit

- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	41.000	



## Control box

- 400 V
- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Code	kg	
<b>790 123 009</b>	29.000	



## Case

- For safe storage of planer and heating element

Code	kg	
<b>790 124 006</b>	341.000	



## Hydraulic hose package

- Flexible hydraulic hoses, with drip-proof, quick-coupling action

Code	kg	
<b>790 123 020</b>	6.000	

# GF 1000 Accessories

## Reduction clamping inserts



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 710, the reduction clamping insert d 800 mm, code 790 124 011, must also be used

d [mm]	narrow Code	wide Code	kg
710	790 123 220	790 123 012	12.500
800		790 124 011	18.000
900		790 124 012	19.000

## Reduction clamping inserts-set

- 8 wide clamping inserts dn 710, 800, 900 mm

Code	kg
790 355 019	350.000



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

Code	kg
790 124 029	153.000



## Electric hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg
790 124 016	300.000



## 1 Set planer blades

- (1 set = 4 blades)

Code	kg
790 124 021	1.300

# GF 1200 Butt fusion machine

## Machine GF 1200 complete



- Robust heating element-butt fusion machine for jointing PP and PE pipes and fittings
- The powerful hydraulic unit (max. hydraulic pressure 200 bar) allows jointing of big wall thickness pipes by keeping provision for dragging the pipes. Example: PE 100 , SDR 17, dn 1200 mm requires a fusion pressure of 125 bar according to DVS 2207 – 1 (0,15 MPa)
- For proper handling of the heating element and planer we recommend the assembling of the hoist unit (790125016)
- Including transport packaging (wooden crate), without accessories and without reduction inserts

d-d [mm]	Performance	Code	kg	
800 - 1200	400 V/20500 W	<b>790 125 025</b>	2932.000	

## Base machine



- High precision design, distortion-free and sturdy machine frame
- Heater release mechanism
- Good accessibility thanks to 45° inclination
- Hardened and hard chrome-plated guide shafts for extreme loads
- Smooth-running cylinder guides with mechanical seals
- Hydraulic connections protected and integrated in base clamping unit for more flexibility when clamping piping components
- Double clamping device for secure hold and exact radial and axial alignment of components
- Tool set specified to machine

d-d [mm]	Code	kg	
800 - 1200	<b>790 125 023</b>	1340.000	

## Planer



- Powerful parallel planer for single or double-sided facing of pipe ends
- Load transfer via maintenance-free chain drive
- Right-angled facing due to wide bedding, with side stop for single-sided facing
- Optimised cutting geometry for even and chatter-free planing
- Planer with Stop mechanism for safety
- Safety microswitch to prevent undesired start-up

d-d [mm]	Performance	Code	kg	
800 - 1200	400 V/3000 W	<b>790 125 003</b>	335.000	

## Heating element



- High performance heating element with electronic, continuously adjustable temperature control
- High temperature accuracy over the entire heating surface

d-d [mm]	Performance	Code	kg	
800 - 1200	400V/16000 W	<b>790 125 004</b>	101.000	

## Case



- For safe storage of planer and heating element

Code	kg	
<b>790 125 006</b>	412.000	



## Hydraulic unit

- Maximum pressure 200 bar
- Compact and robust with two handles for carrying
- Precise hydraulic control for consistent fusion pressure
- Variable, fine adjustment of pressure
- Clearly visible, vibration-free pressure gauge with precision scaling
- Accumulator for pressure equalization during the cooling phase
- Easy level control and refilling of hydraulic oil

Performance	Code	kg	
400 V/1500 W	<b>790 123 010</b>	41.000	



## Control box

- Contains all safety and functional components such as static relay, FI protective switch, temperature control
- Compact unit in steel box with enamel-coated protective frame

Performance	Code	kg	
400 V	<b>790 123 009</b>	29.000	

# GF 1200 Accessories

## Reduction clamping inserts, wide



- Each code number represents 1 piece of reduction clamping insert. Per machine and dimension maximum 8 narrow or wide reduction clamping inserts are needed.
- Reductions in inch sizes or special diameters upon request

In order to mount the inserts d 800/d 900, the reduction clamping insert d 1000, code 790 125 011, must also be used.

d [mm]	Code	kg	
800	<b>790 124 011</b>	18.000	
900	<b>790 124 012</b>	19.000	
1000	<b>790 125 011</b>	20.000	

## Reduction clamping inserts-set

- 8 wide clamping inserts dn 800, 900, 1000 mm

Code	kg	
<b>790 360 019</b>	400.000	



## Flange adapter clamping unit

- For correct clamping and fusion jointing of short-ended stub ends

Code	kg	
<b>790 125 029</b>	231.000	



## Electric Hoist unit

- Hoist capacity 500 kg
- Arm length 2m, pivoting, back/forward, max. column height from floor 4.65 m, 2 hoisting speeds (2.5 m/min. and 5.5 m/min.)

Code	kg	
<b>790 125 016</b>	308.000	



## 1 Set planer blades

- (1 set = 4 blades)

Code	kg	
<b>790 125 021</b>	0.410	



# WR 200

## WR 200 Fusion welding recording device



The WR 200 assists the welder to ensure the quality of the butt-fusion jointing according to country specific standards. The user is guided through all preparation and fusion steps. The selection of the fusion data like the used material, welding standard, diameter and wall thickness (SDR) is supported by a menu. The complete fusion sequence is supervised and recorded for later print out or transfer to a data base. The recorder with its on-board printer is protected by a hard plastic case of IP 65 protection class. The power and connecting cables are stored in a separate box.

The WR 200 can be connected to hydraulically operated butt-fusion machines, even by later retrofitting of machines in service centres .

### Performance:

- Intuitive user guidance menu
- Welding standard selection e.g. DVS, UNI, WIS, ISO
- Welding process customisable: 4 user defined cycle available
- Additional input of joint number, user identity, job site, order number and GPS coordinates
- Internal memory capacity of up to 250 protocols
- Selection of operator language
- Battery support for an autonomy of 10 hours (no data loss during power interruption)
- Rental and revision period adjustable (CD content of delivery)
- Easy configuration by the end user to the connected GF/KL/TM machine
- Same electrical connections as SUVI® 50 and WR 100 – interchangeable
- Working range: -10°C to +50°C

### Data Management:

- Internal memory of 250 protocols
- Print out of protocols directly from on-board printer
- Transfer of protocols to USB memory stick
- Protocols in CSV, TXT and SUVI® WIN-WELD compatible formats

Type	Performance	Dimensions [mm]	Code	kg	
WR 200	230 V	350x300x250 mm	<b>790 119 401</b>	5.000	
WR 200 CYRILLIC	230 V	350x300x250 mm	<b>790 119 425</b>	5.500	



## Machines fitted with WR 200

Type	Performance	Code	kg	
TM 160 WR	230V/1910W	<b>790 150 015</b>	136.000	
TM 160 WR CYRILLIC	230V/1910W	<b>790 150 016</b>	136.000	
TM 250 WR	230V/3280W	<b>790 151 015</b>	210.000	
TM 250 WR CYRILLIC	230V/3280W	<b>790 151 016</b>	210.000	
TM 315 WR	230V/3880W	<b>790 152 025</b>	224.000	
TM 315 WR CYRILLIC	230V/3880W	<b>790 152 016</b>	224.000	
GF 400 WR	400V/5710W	<b>790 127 015</b>	350.000	
GF 400 WR	230V/5710W	<b>790 127 020</b>	350.000	
GF 400 WR CYRILLIC	230V/5710W	<b>790 127 021</b>	350.000	
GF 500 WR	400V/6260W	<b>790 116 075</b>	475.000	
GF 500 WR CYRILLIC	400V/6260W	<b>790 116 074</b>	475.000	
KL 500 TOP 1 WR	400V/6260W	<b>790 340 008</b>	475.000	
KL 500 TOP 2 WR	400V/6260W	<b>790 340 035</b>	475.000	
KL 500 TOP 1 WR CYRILLIC	400V/6260W	<b>790 340 011</b>	3.800	
KL 500 TOP 2 WR CYRILLIC	400V/6260W	<b>790 340 036</b>	475.000	
GF 630 WR	400V/11010W	<b>790 117 075</b>	600.000	
GF 630 WR CYRILLIC	400V/11010W	<b>790 345 036</b>	600.000	
KL 630 TOP 1 WR	400V/11010W	<b>790 345 008</b>	600.000	
KL 630 TOP 2 WR	400V/11010W	<b>790 345 035</b>	600.000	
KL 630 TOP 1 WR CYRILLIC	400V/11010W	<b>790 117 074</b>	600.000	
KL 630 TOP 2 WR CYRILLIC	400V/11010W	<b>790 345 011</b>	600.000	
GF 800 WR	400V/15010W	<b>790 123 075</b>	1550.000	
GF 800 WR CYRILLIC	400V/15010W	<b>790 123 074</b>	1550.000	
GF 1000 WR	400V/19510W	<b>790 124 075</b>	3000.000	
GF 1000 WR CYRILLIC	400V/19510W	<b>790 124 074</b>	3000.000	
GF 1200 WR	400V/20510W	<b>790 125 075</b>	3210.000	
GF 1200 WR CYRILLIC	400V/20510W	<b>790 125 074</b>	3210.000	

## Retrofit kits

The retrofit kit consists of all necessary components in the machine in order to connect the WR 100/200. The connection cables between the WR 100/200 and the hydraulic unit/heating element are part of the welding recorder. The installation of the retrofit kit has to be done by a service centre.

Description	Code	kg	
KL 160	<b>790 119 090</b>	0.300	
KL 250-630	<b>790 119 078</b>	0.136	
GF 160-250	<b>790 119 032</b>	0.136	
GF 315	<b>790 119 039</b>	0.358	
GF 500-1200	<b>790 119 036</b>	1.588	

## Electro fusion units

**MSA 210** monovalent (39,5 V fusion voltage)

**MSA 230** monovalent (39 – 40 V fusion voltage)

**MSA 330** polyvalent (8 – 48 V fusion voltage)

**MSA 340** polyvalent (8 – 48 V fusion voltage)

Reliable and easy to operate electro fusion units for various applications like water and gas distribution, irrigation or industrial applications.

The range of machines includes monovalent (constant fusion tension) and polyvalent welding units. Manual fusion data input or comfortable and safe bar code reading is provided by the units. The functionality to trace the welding and component data - including automatic recording of geo data - is supported within the product line.



# MSA 210

## MSA 210 Manual Electrofusion Unit



Monovalent electrofusion unit (fusion voltage 39,5 Volt) with easy manual entry of fusion time by the operator according to the fitting requirements. The unit can be used to weld +GF+ electrofusion fittings up to a nominal diameter of 500 mm SDR 17. Suitable for jointing in series, temperature excess protected. The unit stores the last fusion time and generates a consecutive fusion counter. A buzzer indicates the start and the end of the fusion cycle.

### Technical Data

Ambient temperature	-10°C to +40°C
Mains voltage	180 V - 250 V AC
Mains frequency	45 Hz - 65 Hz
Fusion voltage	39,5 V
Internal Fuse	20 A
Power consumption	max. 2750 W
Protection	IP 65
Mains cable	4 m
Fusion cable	3 m
Connector	4,0 mm / 90
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LED 1 x 4 N, 7 segments
Size display	50 x 18 mm
Type size	14 mm
Warranty	12 months

Description	Code	kg	
Standard edition	<b>790 128 001</b>	21.000	

# MSA 230 family

## MSA 230 Basic

### Manual Electrofusion unit with jointing data recording



Monovalent electrofusion unit (fusion voltage 39,0 – 40,0 Volt) with manual data entry and recording of jointing data and operator identification code. Easy to handle, robust machine for the whole product range of ELGEF fittings (diameter up to dn 630).

Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series. Easy interaction by choosing the favourite language of the operator.

Scope of delivery includes: 1 pair of straight adapter clips 4.0 ->4.7 mm, operating instructions.

To read out the fusion protocols the data transfer cable (790 128 112) is required. No need for dedicated software, therefore no XP/VISTA compatibility issues.

#### Technical Data

Fusion data entry	manual
Ambient temperature	-10°C - +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷ 70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

Type	Description	Code	kg	
MSA 230 Basic	straight adapter clips 4.0 -> 4.7 mm	790 128 006	22.000	



## MSA 230 Standard Electrofusion unit with jointing data recording

Monovalent electrofusion unit (fusion voltage 39,0 – 40,0 Volt) equipped with barcode reader pen or scanner for automated data entry. Recording of jointing data and operator identification code. Easy to handle, robust machine for the whole range of ELGEF fittings. The Polybrand version supports the input of fusion barcodes from non GF fittings requiring a fusion tension between 39,0 to 40,0 Volt.

Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series.

Easy interaction by choosing the favourite language of the operator. Scope of delivery includes: 1 pair of straight adapter clips 4.0 ->4.7 mm and operating instructions. To read out the fusion protocols, the data transfer cable (790 128 112) is required. No need for dedicated software, therefore no XP/VISTA compatibility issues.

### Technical Data

Fusion data entry	barcode or manual
Ambient temperature	-10°C to +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷ 70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

### Scope of Delivery

MSA 230 Standard Pen	Barcode reader pen with pouch, straight adapter clips 4.0 ->4.7 mm
MSA 230 Standard Scanner	Barcode scanner with pouch, straight adapter clips 4.0 ->4.7 mm

Type	Code	kg	
MSA 230 Standard Pen	<b>790 128 007</b>	22.000	
MSA 230 Standard Scanner	<b>790 128 009</b>	24.000	
MSA 230 Standard Pen Polybrand	<b>790 128 027</b>	22.000	
MSA 230 Standard Scanner Polybrand	<b>790 128 029</b>	22.000	



## MSA 230 All-In Electrofusion unit with jointing data recording

Monovalent electrofusion unit (fusion voltage 39,0 – 40,0 Volt) equipped with barcode reader pen or scanner for automated data entry. Recording of jointing data and operator identification code. Easy to handle, robust machine for the whole range of ELGEF fittings. The Polybrand version supports the input of fusion barcodes from non GF fittings requiring a fusion tension between 39,0 to 40,0 Volt. Reliable process by controlled energy output, including ambient temperature correction factor. Suitable for jointing in series. Easy interaction by choosing the favourite language of the operator.

To the "All-In" version a cable drum for safe and time-saving cable storage is already assembled, also the data transfer cable is in the scope of delivery.

No need for dedicated software, therefore no XP/VISTA compatibility issues. Inclusive 1 pair of straight adapter clips 4.0 -> 4.7 mm, operating instructions.

### Technical Data

Fusion data entry	barcode or manual
Ambient temperature	-10°C to +45°C
Mains voltage	230 V (190 - 265 V)
Mains frequency	50 Hz (40 ÷ 70 Hz)
Fusion voltage	39 ÷ 40 V AC
Internal Fuse	75 A (max. 90 A)
Power consumption	2.75 kW (max. 3.5 kW)
Power plug	Schuko
Protection	IP 54, Class 1
Interfaces	RS 232
Memory capacity	350 records
Mains cable	4 m
Fusion cable	3 m
Dimensions (WxHxD)	270 x 480 x 150 mm
Weight incl. cables	ca. 21 kg
Display	LCD graphic, background light
Size display (WxH)	60 x 17 mm
Character size	2.95 x 5.5 mm
Languages	EN, FR, DE, IT, PL, SP
Warranty	12 months

### Scope of Delivery

MSA 230 All-In Pen	Barcode reader pen with pouch, data transfer cable, cables drum, straight adapter clips 4.0 -> 4.7 mm
MSA 230 All-In Scanner	Barcode scanner with pouch, data transfer cable, cables drum, straight adapter clips 4.0 -> 4.7 mm

Type	Code	kg	
MSA 230 All-In Pen	<b>790 128 008</b>	23.000	
MSA 230 All-In Scanner	<b>790 128 010</b>	23.000	
MSA 230 All-In Pen Polybrand	<b>790 128 028</b>	23.000	
MSA 230 All-In Scanner Polybrand	<b>790 128 030</b>	23.000	

# MSA 330

## MSA 330 Electrofusion unit with jointing data recording



The MSA 330 electrofusion unit combines high performance in jointing with easy and safe handling. The internal memory has a capacity of 500 jointing records, for data transfer the unit is equipped with an USB interface. The record is delivered as PDF or CSV format, both are manageable with common and free PC software applications. An intuitive operation menu is guiding through the complete jointing process. For fusion data input a barcode reader pen or a scanner is connected. The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and the indication of cooling time. Robust aluminum housing with convenient cable rewind and handle for weight balanced transport. The unit is suitable for jointing in series.

Inclusive dedicated transport case, pouch for optical pen or scanner, 2 pairs of angle adapter clips 4,0 mm and 4,7 mm, operation instructions and configuration chart.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	180 V - 265 V AC
Mains frequency	40 Hz - 70 Hz
Fusion voltage	8 - 48 V AC
Fusion current	max. 90 A
Power consumption	max. 2,75 kW
Protection	Class 1 / IP 54
Mains cable	4 m
Fusion cable	4 m
Interface	USB (type A) for PC communication and software updates
Dimensions (WxHxD)	280 x 480 x 320 mm
Weight incl. cables	ca. 21,7 kg
Display	LCD (20 alphanumerical char. x 4 lines), contrast adjustment, blue background, white characters
Languages	10

description	Code	kg	
Barcode reader pen, transport case	790 160 004	30.000	
Barcode scanner, transport case	790 160 005	30.000	





## MSA 330 - 115 Volt Electrofusion unit with jointing data recording

The MSA 330 electrofusion unit combines high performance in jointing with easy and safe handling. The internal memory has a capacity of 500 jointing records, for data transfer the unit is equipped with an USB interface. The record is delivered as PDF or CSV format, both are manageable with common and free PC software applications. An intuitive operation menu is guiding through the complete jointing process. For fusion data input a barcode scanner is connected (manual data input configurable). The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and indication of cooling time. The unit is suitable for jointing in series. Robust aluminum housing with convenient cable rewind and handle for weight balanced transport. Fusion cable detachable with military connector. Inclusive dedicated transport case, pouch for scanner, 2 pairs of angle adapter clips 4,0 mm and 4,7 mm, operation instructions and configuration chart.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	90 V - 135 V AC
Mains frequency	40 Hz - 70 Hz
Fusion voltage	8 - 48 V AC
Fusion current	max. 90 A
Input power	2,75 kW
Protection	Class 1 / IP 54
Mains cable	10 m
Fusion cable	3 m
Interface	USB (type A) for PC communication and software updates
Dimensions (WxHxD)	280 x 480 x 320 mm
Weight incl. cables	25 kg
Display	LCD (20 alphanumeric char. x 4 lines), contrast adjustment, blue background, white characters
Languages	10

description	Code	kg	
Barcode scanner, transport case	790 160 017	25.000	

# MSA 340

## MSA 340 Traceability Electrofusion unit with GPS function



High performance electrofusion unit providing an entire documentation of fusion and traceability data (ISO 12176) including GPS coordinates added automatically to each fusion record. The internal memory has a capacity of 1000 jointing records, for data transfer the unit is equipped with an USB interface. The record is delivered as PDF or CSV format, both are manageable with common and free PC software applications. An intuitive operation menu is guiding through the complete jointing process. For fusion data input a barcode scanner is connected. The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and indication of cooling time. Robust aluminum housing with convenient cable rewind and handle for weight balanced transport. The unit is suitable for jointing in series. Rental time period programmable by the machine owner, unit blocks on expiring date, reset by password.

Inclusive dedicated transport case, pouch for scanner, 2 pairs of angle adapter clips 4,0 mm and 4,7 mm, operation instructions and configuration chart.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	180 V - 265 V AC
Mains frequency	40 Hz - 70 Hz
Fusion voltage	8 - 48 V AC
Fusion current	max. 90 A
Power consumption	max. 2,75 kW
Protection	Class 1 / IP 54
Mains cable	4 m
Fusion cable	4 m
Interface	USB (type A) for PC communication and software updates
Dimensions (WxHxD)	280 x 480 x 320 mm
Weight incl. cables	ca. 21,7 kg
Display	LCD (20 alphanumerical char. x 4 lines), contrast adjustment, blue background, white characters
Languages	10

description	Code	kg	
Barcode scanner, transport case	790 160 007	30.000	



## MSA 340 - 115 Volt Traceability Electrofusion unit with GPS function

High performance electrofusion unit providing an entire documentation of fusion and traceability data (ISO 12176). GPS coordinates of fusion location added automatically to each fusion record. Optional ability of operator ID and job number recognition. The internal memory has a capacity of 1000 jointing records, for data transfer the unit is equipped with an USB interface. The record is delivered as PDF or CSV format, both are manageable with common and free PC software applications. Rental time period programmable by the machine owner, unit blocks on expiring date, reset by password. An intuitive operation menu is guiding through the complete jointing process. For fusion data input a barcode scanner is connected (manual data input configurable). The entire welding process is controlled and regulated with energy output compensation depending on ambient temperature and indication of cooling time. The unit is suitable for jointing in series. Robust aluminum housing with convenient cable rewind and handle for weight balanced transport. Fusion cable detachable with military connector. Inclusive dedicated transport case, pouch for scanner, 2 pairs of angle adapter clips 4,0 mm and 4,7 mm, operation instructions and configuration chart.

### Technical Data

Ambient temperature	-10°C to +45°C
Mains voltage	90 V - 135 V AC
Mains frequency	40 Hz - 70 Hz
Fusion voltage	8 - 48 V AC
Fusion current	max. 90 A
Power consumption	max. 2,75 kW
Protection	Class 1 / IP 54
Mains cable	10 m
Fusion cable	3 m
Interface	USB (type A) for PC communication and software updates
Dimensions (WxHxD)	280 x 480 x 320 mm
Weight incl. cables	ca. 25 kg
Display	LCD (20 alphanumerical char. x 4 lines), contrast adjustment, blue background, white characters
Languages	10

description	Code	kg	
Barcode scanner, transport case	790 160 014	23.000	

# MSA 210 - 230 - 330 - 340 Accessories

## Geothermal cables kit



- Ability to join in parallel 2 couplers of a Y fitting
- Recommended in combination with ELGEF fittings
- Compatible with MSA 210-230, MSA 330-340, MSA 250 – 400, MSA 250 – 400 PLUS
- Connector: 4 mm (90°)
- Cable length: 290 mm
- Welding voltage: 0 – 48 Volt
- Welding current: 40 A (max.)
- Content of delivery: 2 cables, pouch, protection caps, operation manual

Code	kg	
790 160 176	0.385	

## Cables Drum



- Fast and safe cable winding
- Easy to fix to MSA 210 and MSA 230 units
- MSA 230 All-In already assembled with the cables drum

Type	Code	kg	
MSA 210 / MSA 230	790 128 117	0.700	

## Data Transfer Cable



- RS 232 data transfer from MSA 230 to PC

Type	Code	kg	
MSA 230	790 128 112	0.125	

## Barcode Reader Pen



- Automated data entry to MSA 230 / MSA 330 Electrofusion units

Type	Code	kg	
MSA 230 / MSA 330	790 128 111	0.125	

## Pouch For Barcode Reader Pen



- Suitable for barcode reader pens MSA 230 – 330 and others like 799350335 used with MSA PLUS and SUVI units
- 2 separate pockets for storage of reader and adapter clips

Type	Code	kg	
MSA 230 / MSA 330	790 128 110	0.075	

## Barcode Scanner



- Automated data entry to MSA 230 / MSA 330 Electrofusion units

Type	Code	kg	
MSA 230 / MSA 330 / MSA 340	790 128 119	0.250	

## Pouch For Barcode Scanner



- Suitable for barcode scanner MSA 230 (790128119) and MSA 330/340 (790160003)
- 2 separate pockets for storage of reader and adapter clips

Type	Code	kg	
MSA 230 / MSA 330 / MSA 340	790 128 120	0.125	



## Transport Box

- Large, robust transport box

Type	Dimension	Code	kg	
MSA 230	273x263x464	<b>790 128 121</b>	6.300	
MSA 330 / MSA 340	273x263x464	<b>790 160 010</b>	8.000	



## Adapter

- Adapters for Electrofusion units with 4 mm connectors.
- Compatible with electrofusion units MSA 210-230, MSA 330-340, MSA 250 – 400, MSA 250 – 400 PLUS.

Type	Code	kg	Description	
4,0 mm	<b>799 350 340</b>	0.055	Angle adapter, black	
4,7 mm	<b>799 350 341</b>	0.055	Angle adapter, grey	
4,7 mm	<b>799 350 462</b>	0.055	Adapter, white	

## **Tools and Special Machines**

**Belt saws**

**Pipe cutter**

**Chamfering tools**

**Outer bead remover**

**Roller supports**

**Alignment tool**

Belt saws are mainly used in combination with work shop machines, accurate cuts reduce the preparation time for segmented fittings dramatically. The saws could be customized to your needs in respect of size and equipment. Special machines like the saddle machine are not illustrated in this catalogue, but could be offered on request!



## Saws

### KS 355 Plastic pipe cutter



- The KS 355 is the ideal tool for simple right angle precision cutting of PVC, PE and PP pipes, Size range d 160 to 355 mm with a wall thickness up to 40 mm. Including transport box.
- Unique clamping mechanism, no additional tools like belts, chains or reduction inserts necessary

d-d [mm]	Code	kg	
160 - 355	<b>790 202 001</b>	35.000	

### KS 355 Saw blade Ø 180x30



Code	kg	
<b>790 202 011</b>	0.485	

### BS 450 Belt saw size range d 90 - 450 mm



- For exact cutting of PE, PP, PVC and PVDF plastic pipes, size range d 90 - 450 mm
- Pipe cutter with sturdy tubular steel stand and integrated V-bed
- Variable clamping system for fastening the pipe in the V-bed
- Angles from 0° to 45° to one side can be freely adjusted
- Easy to disassemble into subcomponents and transport to job sites
- Spring-resilient lowering of saw bow
- Easy saw blade replacement system with centering mechanism
- Application: up to d 160 PN 10, up to d 250 PN 6, up to d 450 PN 3,2

d-d [mm]	Code	kg	
90 - 450	<b>790 109 045</b>	160.000	

### BS 630 Belt saw



- Angles from 0° to 45° to one side can be freely adjusted
- For exact cutting of PE, PP, PVC and PVDF pipes, size range d 100 - 315 mm and 200 - 630 mm
- Pipe cutter with sturdy tubular steel stand
- Variable clamping system for fastening the pipe in the V-bed
- Spring-resilient lowering of saw bow
- Easy saw blade replacement system with centering mechanism

d-d [mm]	Code	kg	
110 - 630	<b>790 109 047</b>	340.000	

### BS Wearing Parts

- Saw belt

Article	Code	kg	
BS 450	<b>790 109 046</b>	0.400	
BS 630	<b>790 109 048</b>	0.500	
BS 1200	<b>790 109 042</b>	3.402	

# Tools for pipeline construction

## Chamfering tools



Tool for beveling (15° angle) the outer diameter of the thermoplastic pipes (PVC, ABS, PB, PP, PE). Sliding surface out of industrial felt.

d-d [mm]	Code	kg	
40 - 200	<b>790 309 001</b>	1.607	
50 - 315	<b>790 309 002</b>	3.265	



## Chamfering tools

- Chamfering tool (15° bevel) for plastic pipes (PVC, ABS, PB, PP, PE). Coated prism surface suitable for clean room applications. Fast and reliable adjustment to the different pipe diameters and wall thickness.

d-d [mm]	Code	kg	
16 - 200	<b>790 309 003</b>	1.500	
63 - 400	<b>790 309 004</b>	3.000	



## Spare blade for chamfering tool

Description	d-d [mm]	Code	kg	
Spare blade	16 - 400	<b>790 309 015</b>	0.010	
Counter blade	16 - 400	<b>790 309 016</b>	0.012	



## Outer bead remover

d-d [mm]	Code	kg	
110 - 160	<b>790 109 241</b>	1.850	
140 - 250	<b>790 109 242</b>	1.950	
180 - 315	<b>790 109 243</b>	2.697	
280 - 450	<b>790 109 244</b>	2.700	



## Replacement blades

d-d [mm]	Code	kg	
110 - 160	<b>790 109 233</b>	0.004	
140 - 315	<b>790 109 234</b>	0.020	



# Accessories for job sites

## Roller support 315



- For pipes up to d 315 mm, with base plate, galvanised
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 300 kg

d-d [mm]	Code	kg	
20 - 315	<b>790 109 110</b>	4.000	

## Support 630



- Up to d 630 mm, with base plate, galvanised
- **adjustable height** (60 mm)
- The piping can be pulled with little effort
- Protects pipes from damage
- Reduces resistance during fusion
- Maximum load 1000 kg

d-d [mm]	Code	kg	
110 - 630	<b>790 109 109</b>	4.200	

## Alignment Tool



- To align and position pipes in the dimension range d 110 - 400 mm. The pipes are clamped in the vice, the axial movement takes place by a chain drive. The chain is rotated by the ratcheted (square 19 mm).

Article	Code	kg	
Alignment Tool	<b>790 109 108</b>	15.000	
Ratch	<b>790 109 107</b>	1.220	

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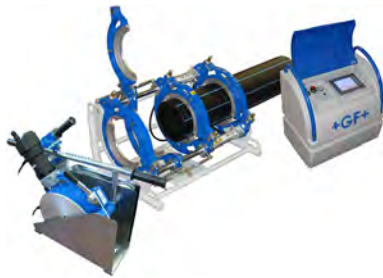
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790 151 027	44	790 311 053	14		
790 151 045	52	790 311 054	14		
790 151 046	52	790 311 055	14		
790 151 050	52	790 311 056	14		
790 151 051	52	790 311 057	14		
790 151 071	49	790 311 060	14		
790 151 205	51	790 311 061	14		
790 151 206	51	790 311 062	14		
790 151 303	53	790 311 063	14		
790 152 000	45	790 311 064	14		
790 152 001	43	790 311 065	14		
790 152 003	46	790 311 066	14		
790 152 006	44	790 311 067	14		
790 152 009	44	790 311 071	14		
790 152 010	43	790 311 072	14		
790 152 012	48	790 319 007	51		
790 152 014	43	790 340 000	62		
790 152 016	47	790 340 001	61		
790 152 025	47	790 340 002	61		
790 152 026	45	790 340 003	61		
790 152 027	44	790 340 005	62		
790 152 045	52	790 340 008	82		
790 152 046	52	790 340 011	82		

## Rental Machines

- Butt Fusion Machines for Gas+Water Distribution



- Electro Fusion unit for Gas+Water Distribution



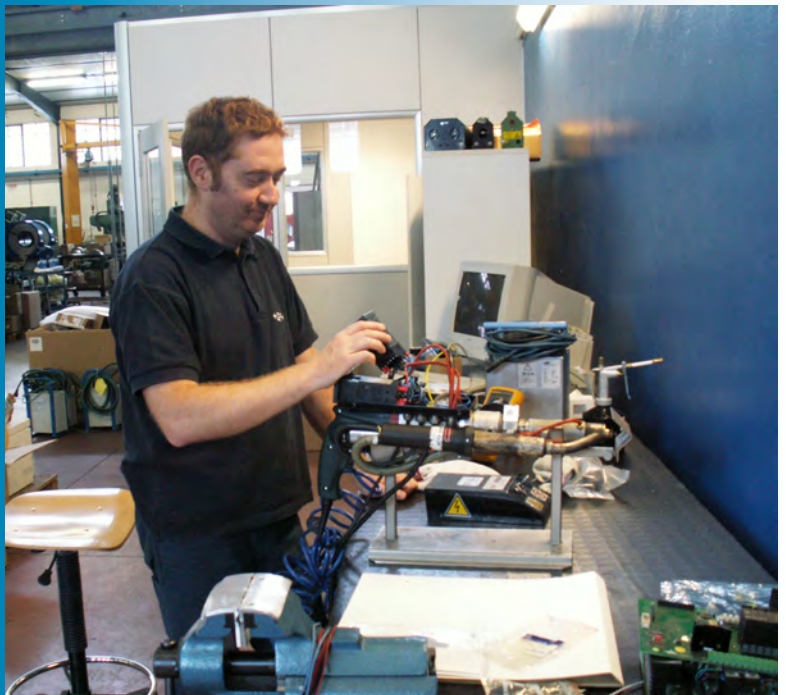
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## Service Activities

- Service training organization



- Machine repairs



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